STR-D2010

SERVICE MANUAL

US Model
Canadian Model

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8-ohm load, both channels driven, from 20 – 20,000 Hz, rated 130 watts per channel minimum RMS power, with no more than 0.008% total harmonic distortion from 250 milliwatts to rated output.

Other Specifications

Amplifier section

Dynamic power output	8 ohms, at 1 kHz IHF	195 + 195 watts
	4 ohms, at 1 kHz IHF	250 + 250 watts
Power output of surround amplifier (8 ohms, at 1 kHz)		15 + 15 watts
Harmonic distortion at rated output		Less than 0.008%
Intermodulation (IM) distortion at rated output		Less than 0.008%
Frequency response	PHONO RIAA equalization curve	±0.5 dB
	CD, DAT, TAPE 1/2, DIGITAL (OPTICAL/COAXIAL) VIDEO 1, 2, 3	5 Hz – 20 kHz ±0.5 dB
Residual noise		Less than 70 µV
Damping factor (8 ohms, at 1 kHz)		50
Input sensitivity/inpedance	PHONO MM	3 mV, 50 kilohms
	DAT, CD, VIDEO 1, 2, 3 TAPE 1, 2	200 mV 50 kilohms
	DIGITAL (COAXIAL)	0.5 Vp-p, ±20%, 75 ohms
	DIGITAL (OPTICAL)	TOSLINK
Output sensitivity/impedance	DAT OUT TAPE OUT 1, 2 VIDEO 1	200 mV 10 kilohms
	SPEAKERS	Accepts speakers of 8 – 16 ohms
	HEADPHONES	Accepts headphones of high and low impedance
MUTING		–20 dB

— continued on next page —

FM STEREO/FM-AM RECEIVER

SONY®

MICROFILM

Digital section

Modulation (A/D conversion)		16-bit liner
Demodulation (D/A conversion)		Dual 18-bit liner
Digital filter		18-bit 8-times over sampling
Sampling frequency		32 kHz, 44.1 kHz, 48 kHz
Parametric equalizer (at 44.1 kHz)	Frequency	27, 37, 52, 72, 100, 140, 190, 270, 370, 520, 720 Hz
		1.0, 1.4, 1.9, 2.7, 3.7, 5.2, 7.2, 10, 14 kHz
	Level	+/– 10 dB, 2dB/step
Delay time		1 ms – 9.9 s
DDS		+ 6 dB

Video section

Inputs	VIDEO 1, 2, 3: 1 Vp-p 75 ohms
Outputs	VIDEO 1, MONITOR: 1 Vp-p 75 ohms

FM tuner section

Frequency range		87.5 - 108.0 MHz
Antenna terminals		75 ohms coaxial
Sensitivity at 50 dB		18.3 dBf, 45 µV (mono) 38.3 dBf, 45 µV (stereo)
Usable sensitivity		11.2 dBf, 2 µV (IHF)
S/N	Mono	84 dB
	Stereo	78 dB
Harmonic distortion at 1 kHz	Mono	0.2%
	Stereo	0.4%
IM distortion	Mono	0.2%
	Stereo	0.4%
Separation		45 dB at 1 kHz
Frequency response		30 Hz – 15 kHz $^{+0}_{-1.5}$ dB
Selectivity		65 dB at 300 kHz
Capture ratio		1.2 dB
AM suppression ratio		60 dB
Image response ratio		80 dB
IF response ratio		90 dB
Sprious response ratio		100 dB
RF intermodulation at 800 kHz		65 dB
Auto tuning threshold	Low	30 dBf
	High	50 dBf

AM tuning section

Frequency range	530 - 1710 kHz (with 10 kHz interval) 531 - 1710 kHz (with 9 kHz interval)
Antenna	Loop antenna
Usable sensitivity	50 dB/m (at 1,000 kHz or 999 kHz)
S/N	54 dB (at 50 mV/m)
Harmonic distortion	0.5% (50 mV/m, 400 Hz)
Selectivity	35 dB (9 kHz), 40 dB (10 kHz)
Auto tuning threshold	55 dB/m

General

System	Tuner section	PLL quartz-locked digital synthesizer system
	Preamplifier section	Low-noise NF type equalizer
	Power amplifier section	Pure-complimentary SEPP.
Power requirements		120 V AC, 60 Hz
Power consumption		USA model: 250 watts Canada model: 520 VA (5 watts at standby condition)
AC outlets		Two switched, total 100 watts
Dimensions		430 × 148 × 369 mm (17 × $5\frac{7}{8}$ × $14\frac{5}{8}$ inches)
Weight		12.1 kg (26 lb 11 oz)

Supplied accessories

FM ribbon antenna (1), AM loop antenna (1)
Programmable System Commander RM-P201 (1)
External antenna connector (1)
Sony Batteries SUM-3 (NS) (2)

Design and specifications subject to change without notice.

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SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

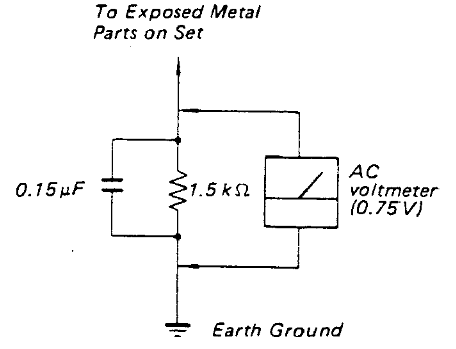


Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1
GENERAL

1-1. OVERVIEW

The STR-D2010 is a FM stereo/FM-AM receiver with a built-in digital signal processor. You can enjoy various audio and video program sources with this unit.

Digital surround processor

The STR-D2010 incorporates five types of surround effect and you can adjust reverberation/initial delay time and surround level to maximize each effect for your room.

- ᗡD DOLBY SURROUND * – reproduces the specially encoded sound on Dolby surround video programs.
- Hall surround -- provides reverberation such as that produced in a large concert hall.
- Live surround -- provides reflected sounds such as those produced at live performance.
- Stadium surround -- gives the feeling of sound heard in a large stadium.
- Simulated surround -- gives width and depth to the monaural sound of old movies, etc.

* Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792, and 3,959,590; Canadian numbers 1,004,603 and 1,037,877. "DOLBY" and the double-D symbol ᗡD are trademarks of Dolby Laboratories Licensing Corporation.

Digital parametric equalizer

- You can enjoy program sources with appropriate equalization curve by controlling the level of the desired 3 frequency bands.
- You can store the equalization curves you created and recall them very quickly.
- EQ Link system allows you to tune in a preset station and immediately enjoy the sound with the stored equalization curve.

Digital Dynamic Sound

- You can enjoy dynamic sound even at small output levels.

TV/VCR control center

- You can control up to three VCRs or video disc players and a monitor TV with this unit.
- You can enjoy TV or CATV programs with FM simulcast sounds.
- You can add sounds from various audio program sources to video tapes during editing.

Quartz-locked digital synthesizer tuner

- You can store up to 30 radio broadcast stations in the unit.
- Index Tuning system allows you to categorize the stations by kinds of music, etc. and tune in a station quickly.

High-power amplifier with a built-in D/A converter

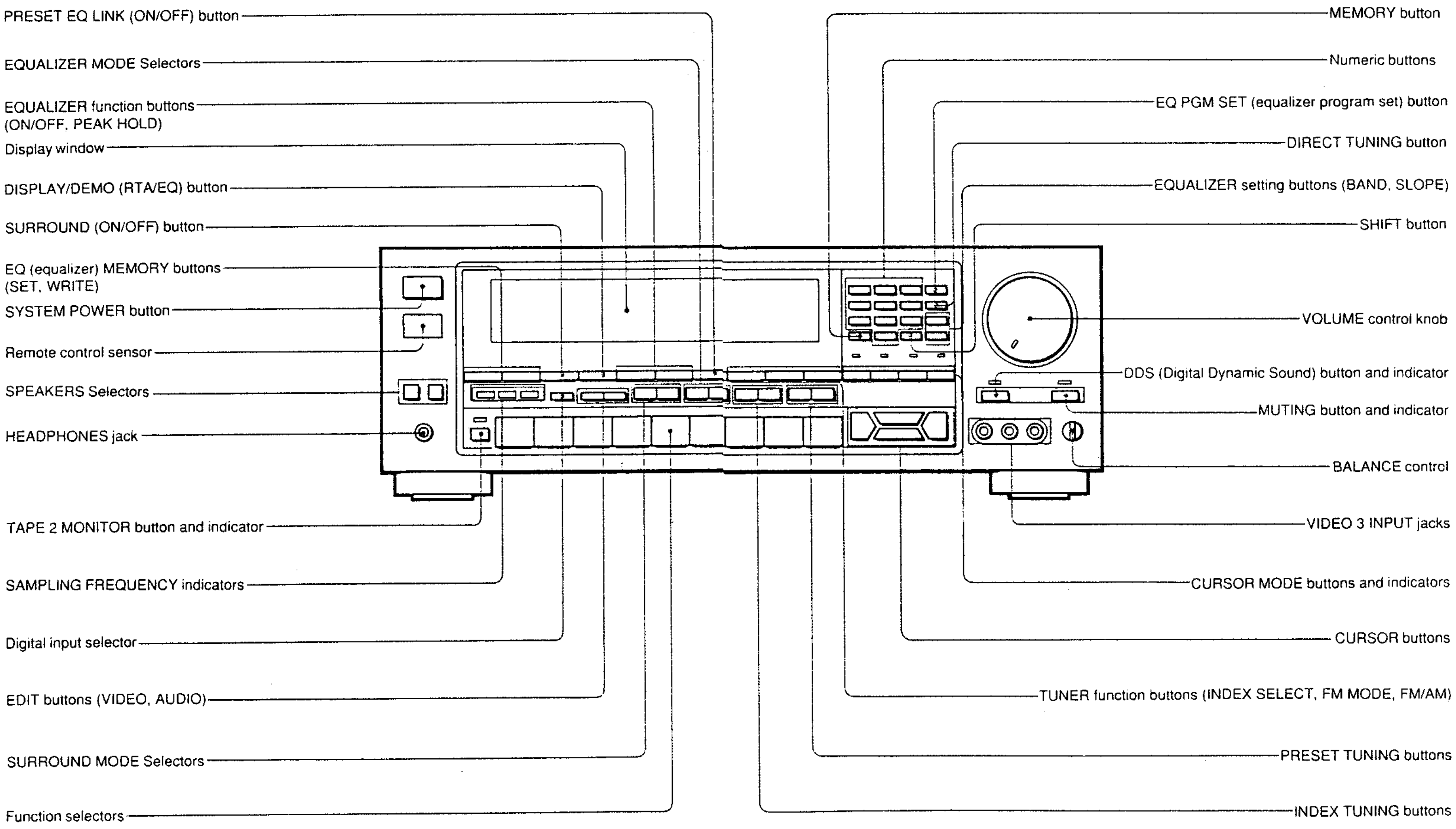
- The built-in D/A converter allows you to directly connect digital audio equipment with optical/coaxial digital outputs.
- Independent 2-channel amplifier is built-in for the rear surround speakers.
- The amplifiers in this unit output 195 + 195 watts for the front speakers and 15 + 15 watts for the rear speakers at dynamic power output.

Programmable system commander RM-P201

- The supplied remote commander can "learn" the various functions of other infrared type remote commanders.

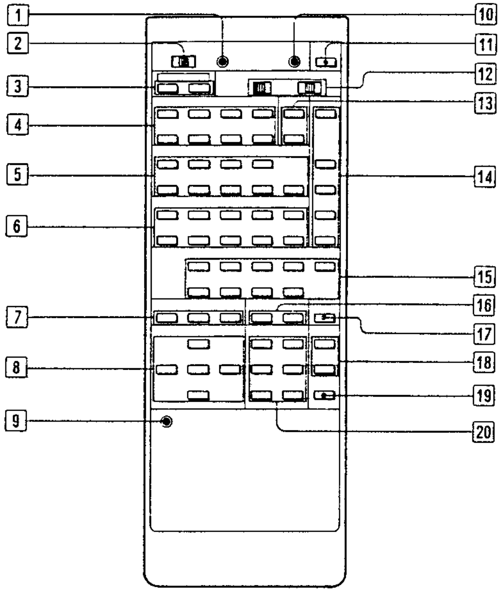
1-2. PARTS IDENTIFICATION

Front Panel


PRESET EQ LINK (ON/OFF) button
EQUALIZER MODE Selectors
EQUALIZER function buttons (ON/OFF, PEAK HOLD)
Display window
DISPLAY/DEMO (RTA/EQ) button
SURROUND (ON/OFF) button
EQ (equalizer) MEMORY buttons (SET, WRITE)
SYSTEM POWER button
Remote control sensor
SPEAKERS Selectors
HEADPHONES jack
TAPE 2 MONITOR button and indicator
SAMPLING FREQUENCY indicators
Digital input selector
EDIT buttons (VIDEO, AUDIO)
SURROUND MODE Selectors
Function selectors
MEMORY button
Numeric buttons
EQ PGM SET (equalizer program set) button
DIRECT TUNING button
EQUALIZER setting buttons (BAND, SLOPE)
SHIFT button
VOLUME control knob
DDS (Digital Dynamic Sound) button and indicator
MUTING button and indicator
BALANCE control
VIDEO 3 INPUT jacks
CURSOR MODE buttons and indicators
CURSOR buttons
TUNER function buttons (INDEX SELECT, FM MODE, FM/AM)
PRESET TUNING buttons
INDEX TUNING buttons

Programmable System Commander RM-P201 (supplied)

The RM-P201 can "learn" various functions of other remote commanders which use infrared rays.
When the mode selector is set to SONY STD (Sony Standard), buttons on the RM-P201 can be used to perform the functions below.



1 **LEARN indicator**

2 **Mode selector**
SONY STD : To operate the commander on Sony standard.
USER STD : To use the learned functions.
LEARN : To learn other functions.

3 **TV and VTR POWER buttons**
TV: Turns on/off the TV.
VTR: Turns on/off the VCR.

4 **CD player operation buttons**
► : Play
■ : Stop
⏮ ⏭ : AMS (Automatic Music Sensor)
PGM : Program play
SHUFFLE : Shuffle play
CONTINUE : Continuous play
DISC SKIP : Disc skip

5 **TAPE deck operation buttons**
◄◄ : Reverse fast winding
◄ : Reverse play
► : Forward play
►► : Forward fast winding
■ : Stop
II : Pause
● : Recording (While you press ●, REV for reverse recording or FWD for forward recording.)

6 **VTR operation buttons**
◄◄ : Rewind
► : Play
►► : Fast forward
■ : Stop
II : Pause
● : Recording buttons (Press both buttons for recording.)
ANT TV/VTR : Selects the output signal from the antenna terminal from the VCR, either TV or VCR.
CH +/– : Channel select buttons

7 **EQUALIZER operation buttons**
ON/OFF : Turns on/off the equalizer.
MODE : Selects the equalizer mode (A to G).
BAND : Selects the frequency band.

8 **CURSOR MODE operation buttons**

9 **RESET button**
Press this button and operate again if the equipment works incorrectly.

10 **PROGRAM CLEAR button**

11 **POWER button**
Turns on/off the receiver.

12 **DECK and VTR selectors**
DECK A, B : Selects cassette deck A or B.
VTR 1, 2, 3 : Selects VCR 1, 2 or 3.
1 : Betamax VCRs
2 : 8 mm VCRs
3 : VHS VCRs

13 **PHONO buttons**
START : Starts record play.
STOP : Stops record play.

14 **TV operation buttons**
TV/VIDEO : Selects the input signal to the TV set, either a TV broadcast or VCR programs.
VOL (volume) +/– buttons
CH (channel) +/– buttons

15 **FUNCTION selectors**

16 **SURROUND buttons**
ON/OFF : Turns on/off the surround function.
MODE : Selects the surround mode.

17 **DBFB/DDS ON/OFF button**
Turns on/off the DDS (Digital Dynamic Sound).

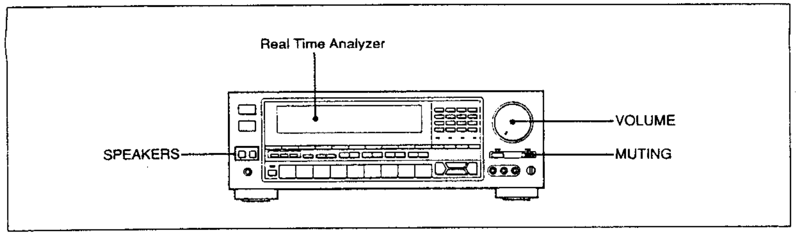
18 **VOL (volume) control buttons**

19 **MUTING button**

20 **TUNER operation buttons**
INDEX +/– : Selects a next/previous preset station under the same index.
SELECT : Index select button
PRESET +/– : Selects a higher/lower preset number.
EQ LINK : Turns on/off the EQ link.

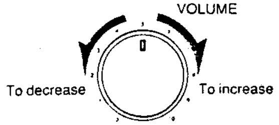
Notes
- When the CONTROL S OUT connector is connected to the CONTROL S IN connector of each equipment, you can control the connected equipment using this remote commander.

1-3. BASIC CONTROLS



Volume Adjustment

To adjust the output level
Turn the VOLUME control knob.



To reduce the sound temporarily to a low level (−20 dB attenuation)
Press MUTING. Press again to restore the previous sound level.

Balance Adjustment

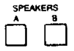
To change the relative output level of the right and left speakers
Turn the BALANCE control to correct stereo imaging when the speaker position is not symmetrical.

BALANCE
LEFT
RIGHT

Speaker Selection

Press SPEAKERS A to select the speaker system connected to SPEAKERS A terminals.
Press SPEAKERS B to select the speaker system connected to SPEAKERS B terminals.
Press SPEAKERS A and B to select the both.

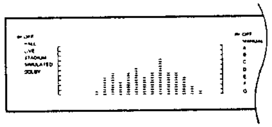
- Select SPEAKERS A to listen to the surround sound with both front and rear surround speakers. When SPEAKERS B is selected, rear surround speakers will not activate.
- The signal from the PRE OUT jack is output regardless of the speaker selection.



Real Time Analyzer (RTA)

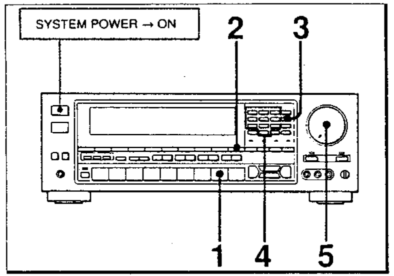
The real time analyzer displays audio output levels of each frequency segment. To check the peak levels, press PEAK HOLD.
To change the display to the parametric equalizer or the demonstration mode, press RTA/EQ until the desired display appears.

DISPLAY/DEMO
RTA/EQ

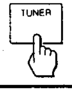


1-4. RECEIVING RADIO BROADCAST PROGRAMS

Direct Tuning



1 Select TUNER.



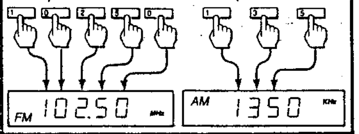
2 Select FM or AM.

3 Press TUNING DIRECT.

TUNING
DIRECT

4 Enter the frequency of the desired station.

Example 1: FM 102.50 MHz **Example 2: AM 1350 kHz**



5 Adjust the volume.

Tuning intervals for direct tuning
FM: 50 kHz interval
AM: 10 kHz interval (changeable to the 9 kHz interval)

Changing the AM tuning interval
The AM tuning interval is preset to 10 kHz. To use the receiver where the frequency allocation system is based on the 9 kHz interval, make the following adjustments:

1. Turn on the power and tune in any AM station.
2. Press SYSTEM POWER to turn off the receiver.
3. While pressing PRESET TUNING +, press SYSTEM POWER again to turn on the receiver.

Resetting the AM tuning interval
Follow the procedure for changing the AM tuning interval.

Caution
When the interval is changed, all preset stations which you have stored will be erased. After changing the interval, be sure to newly preset stations. (See "Presetting Stations" on page 8.)

When the entered number is not in the receivable frequency range
The entered digits blink in the frequency display area, and reception does not take place.
If this condition occurs, press TUNING DIRECT again, and enter the correct frequency (the frequency range of the receiver is 87.50 to 108.0 MHz for FM, and 530 to 1710 kHz for AM).

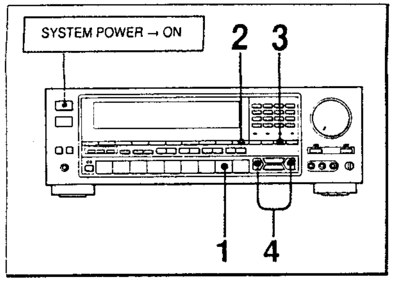
Correcting the entered frequency
Repeat Steps 3 to 4 of direct tuning.

For entering AM frequencies, you need not enter the last "0".
However, if you have changed the AM tuning interval to 9 kHz, enter all the digits.

If you enter a frequency not covered by the tuning interval
The entered value is automatically rounded up or down to the closest value covered by the tuning interval.

When an FM stereo program is noisy
When the unit receives an FM stereo program, the STEREO indicator goes on in the display window. If the stereo program is noisy, press FM MODE to change the mode over to MONO. This eliminates the stereo effect, but the noise will be greatly reduced. To return to the stereo mode, press FM MODE again.

Auto Tuning



1 Select TUNER.

2 Select FM or AM.

3 Select CURSOR MODE TUNING.

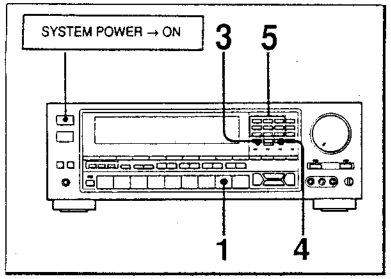
4 Press a cursor to start auto tuning.

To tune in lower frequencies ◁ ▷ To tune in higher frequencies

Selecting the signal level of the station to be tuned in
You can select "high" or "low" as the FM tuning level by pressing cursors.
Press △ to select high; HIGH displayed in the display window.
Press ▽ to select low: HIGH display disappears.

HIGH: The frequencies of strong signal stations only will be tuned in.
LOW: The frequencies of all receivable stations will be tuned in.

Presetting Stations



A total of 30 FM/AM stations (10 stations on each memory page) can be stored in the unit's memory in any desired sequence.

1 Select TUNER.

2 Tune in the desired station by direct tuning or auto tuning.

3 Press MEMORY.
MEMORY indicator appears for a few seconds.

4 Press SHIFT to select the memory page (A, B, or C).
The memory pages can be classified according to the station band, etc.

5 Press the desired numeric button (1 to 0) to preset the station.

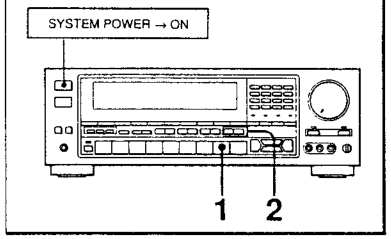
Repeat above steps for presetting other desired stations.

If the MEMORY indicator goes off before pressing the numeric button
Press MEMORY again to display the indicator.

Replacing a preset station
Preset another station on the number of the station to be replaced. The previously preset station will be erased.

Tuning in Preset Stations – Preset Tuning

Scanning preset stations

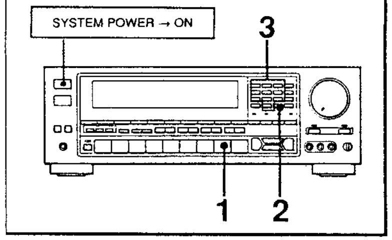


1 Select TUNER.

2 Select the desired preset station by pressing PRESET TUNING +/–.

- Each time you press PRESET TUNING + (or –), a preset station of next higher (or lower) preset number is tuned in.
- If you keep pressing + (or –), preset stations are successively tuned in the increasing (or decreasing) order. Release the button when the desired station is tuned in.
- Scanning of the preset stations takes place cyclically from AM to FM, and vice versa.

Tuning in preset stations directly

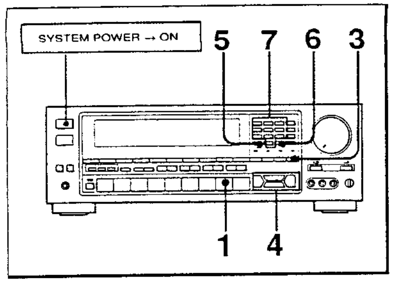


1 Select TUNER.

2 Press SHIFT to select the memory page (A, B, or C).

3 Press the desired numeric button (1 to 0).

Labelling the Preset Stations – Index Input


SYSTEM POWER → ON
5
7
6
3
1
4

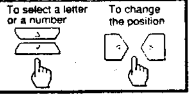
You can organize preset stations under Index Names which you create (up to 4 characters) to categorize the stations by the types of music, for example, ROCK, JAZZ, etc.

1 Select TUNER.

2 Tune in the desired preset station.

3 Press CURSOR MODE INDEX.

4 Create a Index Name.


To select a letter or a number
To change the position

5 Press MEMORY.
The MEMORY indicator appears for a few seconds.

6 Press SHIFT to select the memory page (A, B, or C).

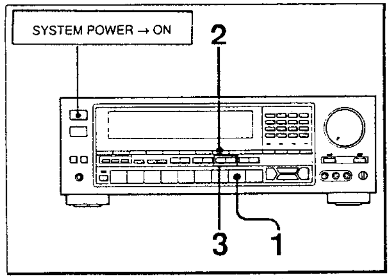
7 Press the desired numeric button (1 to 0).

Repeat steps 2 to 7 to label other stations.

Pressing CURSOR MODE INDEX twice make all 4 digits of the index flash.
Then, all previously memorized indexes can be called up by pressing △ or ▽. This allows you to change a part of previously memorized index to create another new one. To return to the previous mode, press CURSOR MODE INDEX again.

A station can be stored under only one Index Name
If you store an already categorized station under any other Index Name, only the last selected category will be valid.

Index Tuning

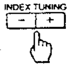

SYSTEM POWER → ON
2
3
1

1 Select TUNER.

2 Select the Index Name by pressing INDEX SELECT.

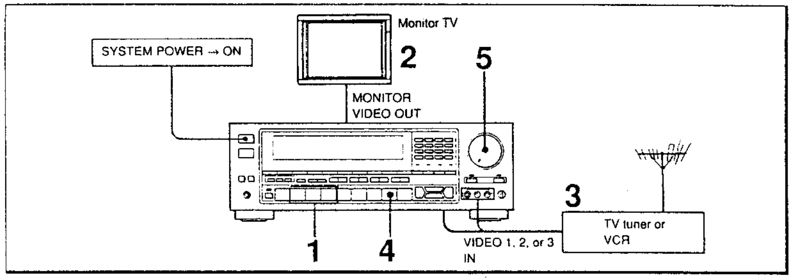
INDEX SELECT

3 Select the desired station by pressing INDEX TUNING +/–.

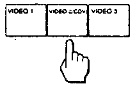

INDEX TUNING
–
+

When you want to tune in a station memorized under a different Index Name, press INDEX SELECT as many times until the desired Index Name appears.

Receiving FM Simulcast TV Programs


SYSTEM POWER → ON
Monitor TV
2
5
MONITOR VIDEO OUT
3
TV tuner or VCR
VIDEO 1, 2, or 3 IN
1
4

1 Select VIDEO 1, VIDEO 2/CDV, or VIDEO 3.


VIDEO 1
VIDEO 2/CDV
VIDEO 3

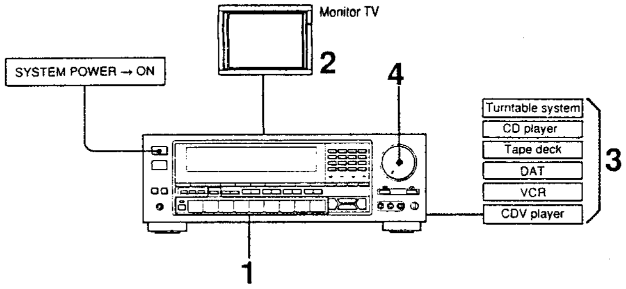
2 Turn on the TV.

3 Select the simulcast TV program on the TV tuner or the VCR.

4 Select TUNER and tune in the FM simulcast program on the receiver.

5 Adjust the volume.

1-5. LISTENING TO OTHER PROGRAM SOURCES



1. Select the program source.
   When you select DIGITAL, press the digital input selector to select 1-OPTICAL or 2-COAXIAL. When the digital audio signal is input, SAMPLING FREQUENCY indicator will glow according to its sampling frequency (ex. 44. 1 kHz for CD, etc.).
2. Turn on the TV when you selected video program sources.
3. Start the selected program.
4. Adjust the volume.

1-6. ENJOYING DIGITAL SOUND EFFECTS

The STR-D2010 incorporates a digital signal processor which consists of digital parametric equalizer, digital surround processor, and the DDS (Digital Dynamic Sound).
The parametric equalizer controls the output level of the desired frequencies, and the sorround processor electronically reproduces a natural sound field for various kinds of music. The DDS system provides powerful sound even at small output levels.
By using these three digital sound effects, you can create a optimum sound quality and sound atmosphere in your room.

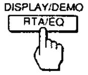
Understanding the Sound Effects with the Demonstration Mode

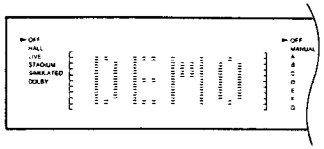
The STR-D2010 has the demonstration mode which illustrates the effects of each digital sound effect and other main features, such as Index Tuning. Before controlling sound effects, experience the difference with the actual sound and displays on the unit.

To start the demonstration mode

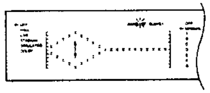
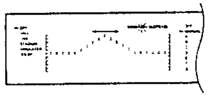
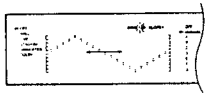
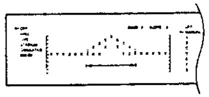
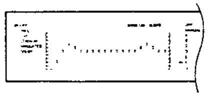
1. Play back a program source, such as a CD.

2. Press DISPLAY/DEMO until "DEMO" appears on the display. The demonstration mode will illustrate sound effects, etc. in the following order (see the next page):

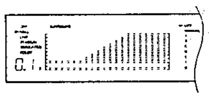




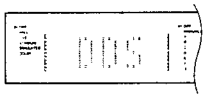
Digital Parametric Equalizer

BAND 1-3 Adjusts the level of each frequency band.	
FREQ Moves the frequency of BAND 1.	
PILE Displays the combination of all three equalization curves and moves the frequencies to show the change of total equlization curve.	
SLOPE Changes the slope of equalization curve.	
CALL Recalls stored equalization curves (A to G).	

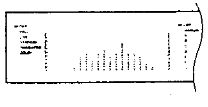
Digital Surround Processor

Displays each surround mode and illustrates the change of reverberation time and surround level.	

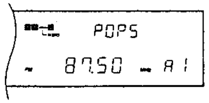
DDS

Turns on and off the DDS.	

DISPLAY

Displays RTA (Real Time Analyzer), PEAK meter, and equalization curve.	

INDEX

Demonstrates creating Index Name and Index Tuning.	

To stop the demonstration mode
Press any button other than SPEAKERS.

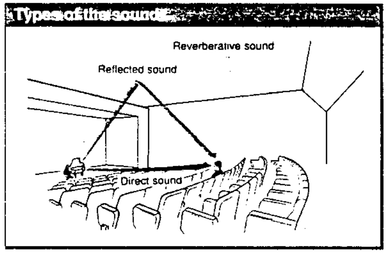
1-7. USING THE SURROUND EFFECTS

What is a surround effect?

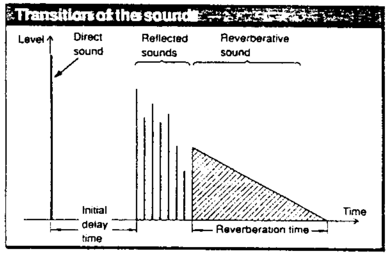
The sound heard in places such as a concert hall or a movie theather consists of a direct sound, a reflected sound and a reverberative sound which reach you later than a direct one. The acoustics of a room affect the way these three sounds are heard. We can estimate the size or type of a hall by listening to these three kind of sounds even with our eyes closed.

The STR-D2010 reproduces the reflected sound and the reverberative sound using its digital signal processor and allows you to design a variety of acoustic sound fields in your own room.

Types of the sounds



Transitions of the sounds



Selecting Sorround Modes

HALL
Provides the reverberation effect that is produced in a concert hall. This mode is most appropriate for programs with little reverberation, such as studio recordings.
You can adjust the reverberation time and surround level.

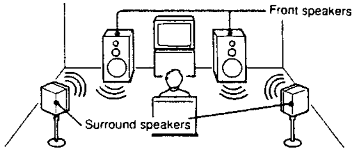
STADIUM
Provides the effect of sound heard in a stadium. This mode is also appropriate for programs with little reverberation, such as studio recordings.
You can adjust the reverberation time and surround level.

LIVE
Provides the effect just of a real live performance. This mode is suitable for enjoying programs with a lot of reverberation, or a movie without Dolby surround processing.
You can adjust the initial delay time and surround level.

SIMULATED
Gives a simulated stereo effect to monaural program source. You can adjust the initial delay time and surround level.

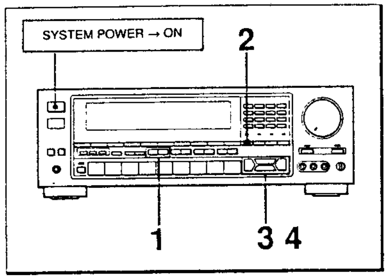
DOLBY
Decodes movie programs processed with the Dolby surround effect. It expands the sound to create a sound as heard in a movie theather. You can adjust the intial delay time and surround level.

How to place speakers

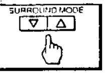


Listening to the Surround Sound

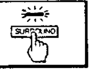
Select SPEAKERS A to listen to the surround sound with both front and rear surround speakers. When SPEAKERS B is selected, rear surround speakers will not activate.



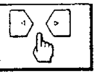
1 Select the desired surround mode.



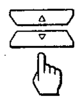
2 Press CURSOR MODE SURROUND.



3 Adjust the reverberation/initial delay time.



4 Adjust the surround level.
*Both the reverberation/initial delay time and surround level are stored in the surround mode each time after adjustment.

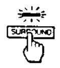


To turn off the surround effect
Press SURROUND ON/OFF. The normal sound without surround effect will resume.

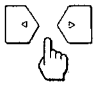
Note
Surround function and parametric equalizer do not have any effect on the program source connected to the TAPE 2 MONITOR.

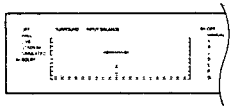
About the input balance control
When selecting the Dolby surround mode, adjust the input balance as flollows:

1 Press CURSOR MODE SURROUND until "INPUT BALANCE" appears on the display.



2 Adjust the input balance so that the audio level of the surround speaker is minimized during the scene of conversation (where the sound is monaural).
Although the balalnce changes each time you press a cursor button, the indicator moves one space for every fourteen to fifteen times the button is pressed.

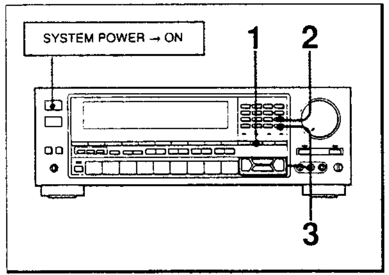




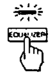
1-8. USING THE PARAMETRIC EQUALIZER

Creating an Equalization Curve

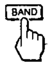
Seven equalization curves are preset at the factory for typical applications (see page 32).
If you want to enjoy music with different equalization curves, follow these steps to create new equalization curves.



1 Press CURSOR MODE EQUALIZER. If only one band number appears, press the button again.



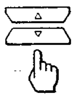
2 Select a frequency band. The selected number blinks.
Although you can select any frequency in the display to any of three bands, it is recommended to use each band as follows for easier operation.



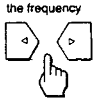
BAND	FREQUENCY
1	For lower frequencies
2	For intermediate frequencies
3	For higher frequencies

3 Create the equalization curve.

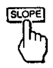
To adjust the level



To adjust the frequency



To adjust the slope



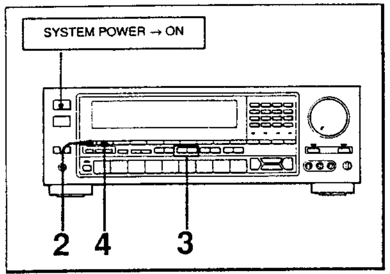
4 Repeat steps 2 and 3 for other frequency bands until you obtain the desired equalization curve.
To restore the real time analyzer display, press RTA/EQ.

To turn off the parametric equalizer effect
Press EQUALIZER ON/OFF. The normal sound without the parametric equalizer will resume.

To check the equalization curve of each frequency band
1 Press CURSOR MODE EQUALIZER until only one band number is displayed.
2 Select the desired frequency band by pressing BAND.

Storing an Equalization Curve

You can store up to seven equalization curves that you have created into the memory and recall them with the EQUALIZER MODE buttons.



1. Create the equalization curve you want to store.
2. Press SET. The MEMORY indicator will appear for a few seconds.
3. Select the desired mode (A to G) under which you want to store the equalization curve.
4. Press WRITE.

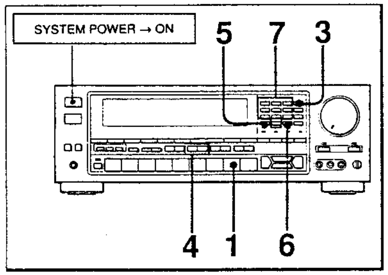
To listen to a music with a stored equalization curve
Select the desired equalization mode. If you have not stored a curve under that mode, the factory-preset curve will be recalled.

When you store a new equalization curve
The factory-preset equalization curve for the same mode will be erased.

Note
Parametric equalizer and surround function do not have any effect on the program surce connected to the TAPE 2 MONITOR.

Assigning an Equalization Mode to Preset Stations – EQ Link

You can assign a stored equlization curve to the desired preset stations.

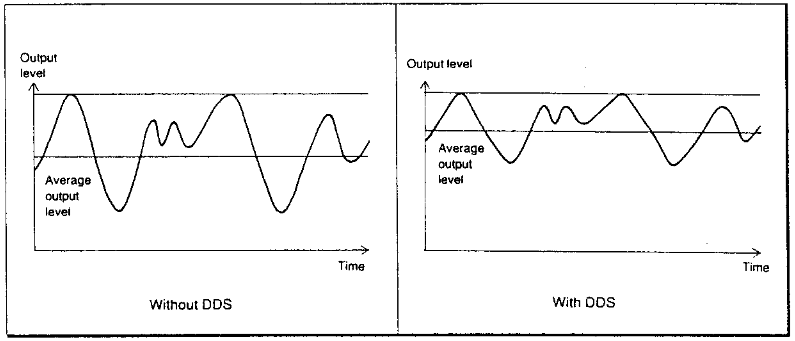


1. Select TUNER.
2. Tune in the desired station (refer to pages 19 - 22 for the operation).
3. Press EQ PGM SET.
4. Select the equalizer mode which you want to assign to the selected station.
5. Press MEMORY. The MEMORY indicator will appear for a few seconds.
6. Press SHIFT to select the memory page (A, B, or C).
7. Press the desired numeric button (1 to 0).

To listen to the preset station with the stored equalizer mode.
Press PREET EQ LINK ON/OFF to turn on the EQ Link function (the indicator will appear). To turn off the function, press PRESET EQ LINK ON/OFF again. Always turn off the EQ Link function before selecting other program sources from TUNER function.

1-9. USING THE DIGITAL DYNAMIC SOUND

The DDS (Digital Dynamic Sound) system increases the average output level of the program source while keeping its maximum peak output level.
Since the DDS makes a powerful sound without increasing the maximum output level, you can enjoy dynamic sound even at small output levels.



Turning on the DDS effect

Press DDS. Press the button again to resume normal sound without DDS.

Note
The DDS will not have any effect when used in Dolby surrond mode.

1-10. RECOMMENDED COMBINATIONS OF THE DIGITAL SOUND EFFECTS

Application/ Situation	Surround function			Parametric equalizer (factory preset mode)	DDS	Effects
	Mode	Reverberation/ initial delay, time	Surround level (number of bar displays)			
When listening to orchestral music.	LIVE	60 ms	15	A	OFF	Provides the atmosphere of a large concert hall.
When listening to instrumental solo or chamber music.	HALL	1.9 s	15	OFF	OFF	Reproduces music with the soft reverberation heard in a medium-size concert hall.
When listening to rock or pops music.	STADIUM	3.3 s	16	C	ON	Gives the atmosphere of a live concert to program sources recorded in a studio.
When listening to disco music.	OFF	–	–	G	ON	Reproduces the powerful bass sound which is heard in discos.
For background music	HALL	1.6 s	12	D	OFF	Gives a light and bright feeling to program sources.
When listening to program sources at small output levels.	HALL	1.6 s	12	E	ON	Gives a powerful feeling even at small output levels.
When enjoying Dolby surround video programs.	DOLBY	20 ms	14	OFF	OFF	Reproduces the full effects of Dolby surround sound as heard in a movie theater.
When enjoying Dolby surround video programs without rear surround speakers.	LIVE	28 ms	18	B	OFF	Reproduces the effects of Dolby surround only with the front speakers.
When enjoying monaural video programs.	SIMULATED	28 ms	15	OFF	OFF	Gives width and depth to the monaural sound of old movies, etc.
When recording a tape for a headphone stereo such as a Walkman*.	OFF	–	–	F	ON	Creates powerful sound with reinforced bass and treble. • Use cassette deck connected to the TAPE 2 jacks.

* Walkman is a trademark of Sony Corporation

To recall factory preset equalizer modes

If you created new equalization curves and stored them in the unit, proceed to recall factory preset ones in the following way.

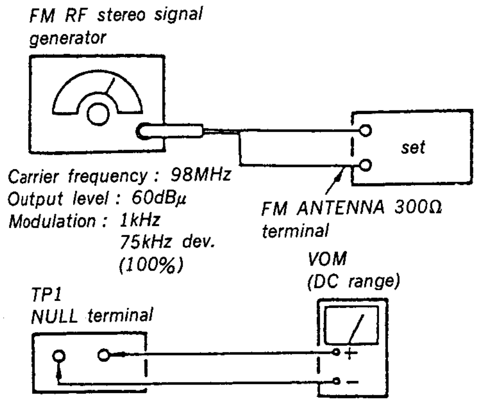
1. Select CURSOR MODE SURROUND.
2. Press SYSTEM POWER to turn off the unit.
3. While pressing the SURROUND MODE △, Press SYSTEM POWER again to turn on the unit.
   Surround settings also reset to the factory preset ones.

SECTION 2
ELECTRICAL ADJUSTMENTS

FM SECTION

• FM Discriminator (NULL) Adjustment

Setting:


FM RF stereo signal generator
set
FM ANTENNA 300Ω terminal
VOM (DC range)
TP1 NULL terminal
+
−

Carrier frequency : 98MHz
Output level : 60dBμ
Modulation : 1kHz
75kHz dev.
(100%)

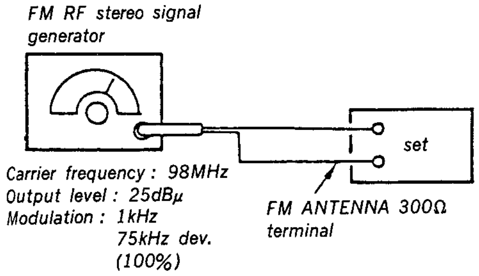
Procedure:

1. Tune the set to 98MHz.
2. Adjust T21 and T22 (AV1010 only) for 0V reading on the VOM.

Note : FM Tuning Level adjustment should be made after FM discriminator adjustment.

• FM Stereo Operation Level Adjustment

Setting:


FM RF stereo signal generator
set
FM ANTENNA 300Ω terminal

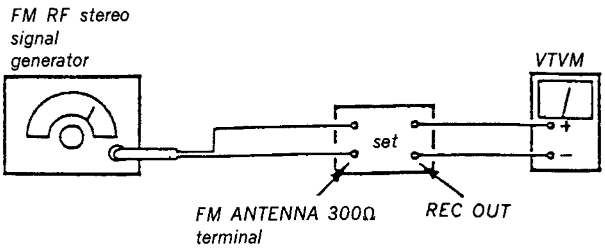
Carrier frequency : 98MHz
Output level : 25dBμ
Modulation : 1kHz
75kHz dev.
(100%)

Procedure:

1. Tune the set to 98MHz.
2. Adjust RV24 so that the STEREO LED goes on.

• FM Stereo Separation Adjustment

Setting:


FM RF stereo signal generator
VTVM
set
+
−
FM ANTENNA 300Ω terminal
REC OUT

Carrier frequency : 98MHz
Output level : 60dBμ
Modulation :
Audio (1kHz) : 33.75kHz dev. (45%)
Pilot (19kHz) : 7.5kHz dev. (10%)
Sub-channel (38kHz) : 33.75kHz dev. (45%)

Procedure:

Tune the set to 98MHz.

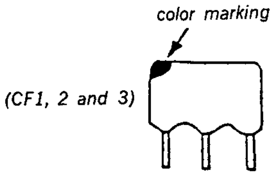
FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV21 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV21 for minimum reading.

L-CH Stereo separation : Ⓐ−Ⓑ
R-CH Stereo separation : Ⓒ−Ⓓ

The separations of both channels should be equal.

Note on Ceramic Filter (CF1, 2 and 3) Replacement.

This set employs two ceramic filters (CF1, 2 and 3) which should have the same color marking to identify their center frequency. Therefore FM IF offset adjustment by D322, D325 mounted is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.

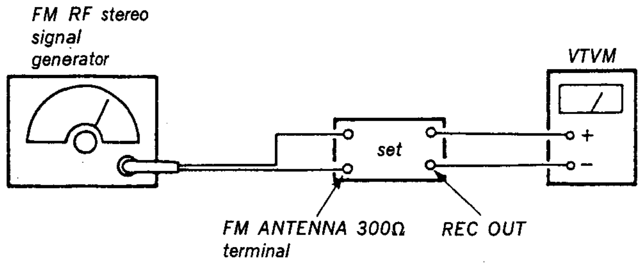

color marking
(CF1, 2 and 3)

○ : Mounted
× : not Mounted

Ceramic filter		Mount		FM intermediate frequency (MHz)
Color mark	Center frequency (MHz)	IF−50k (D322)	IF+50k (D325)	
White	10.750	○	×	10.750
Red	10.700	×	×	10.700
Black	10.650	○	○	10.650

• Auto Stop Level Adjustment

Setting :


FM RF stereo signal generator
VTVM
set
+
−
FM ANTENNA 300Ω terminal
REC OUT

Carrier frequency : 98MHz

Output level : 40dBμ or 45dBμ

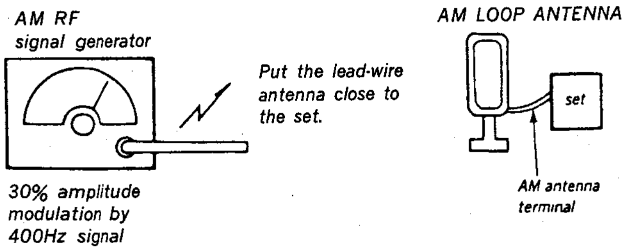
Procedure :

1. Turn the High/Low select switch to High.
2. Adjust RV25 so that the TUNED LED goes on.

AM SECTION

• AM Meter Adjustment

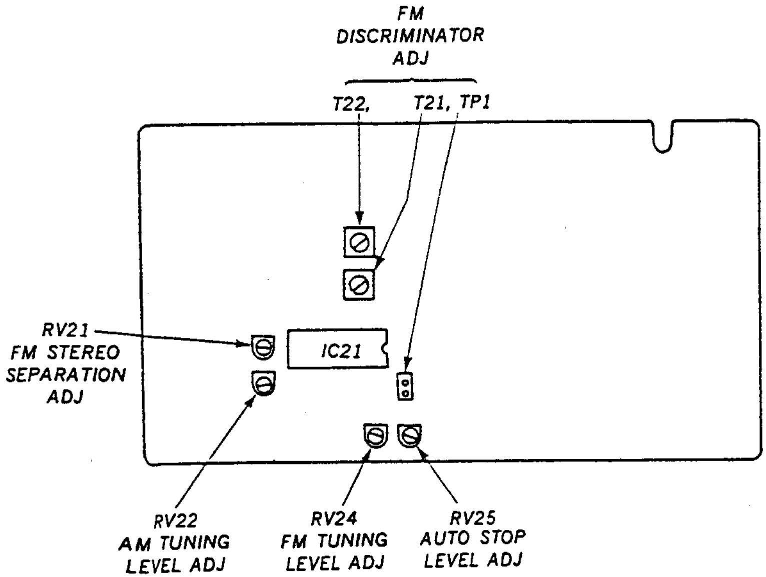
Setting :


AM RF signal generator
Put the lead-wire antenna close to the set.
AM LOOP ANTENNA
set
AM antenna terminal
30% amplitude modulation by 400Hz signal

Procedure :

1. Tune the set to 1,050kHz.
2. Adjust the RV22 so that the TUNED LED goes on.

Adjustment Location : tuner board


FM DISCRIMINATOR ADJ
T22,
T21, TP1
RV21 FM STEREO SEPARATION ADJ
IC21
RV22 AM TUNING LEVEL ADJ
RV24 FM TUNING LEVEL ADJ
RV25 AUTO STOP LEVEL ADJ

AMP SECTION

DC Bias Adjustment

- Perform this adjustment after replacement of power amp or drive circuit transistors.

Setting :

VOLUME : 0
SPEAKERS : OFF (no load)

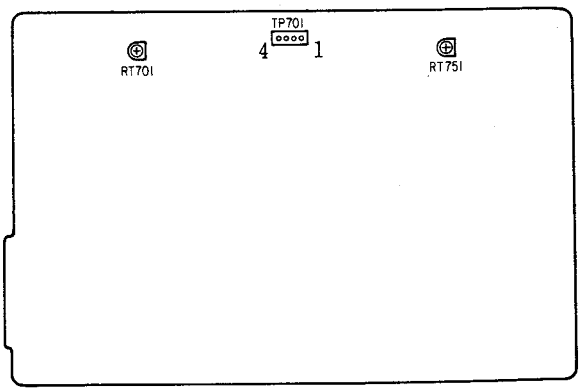
Procedures :

1. Connect the digital voltmeter to Bias Test Point (TP-701 ①, ② L-CH, TP-701 ③, ④ R-CH)
2. Increase the AC power voltage gradually to 120V confirming that the voltmeter will not indicate an abnormal value.
3. Confirm that the display is normal.
4. Adjust RT701 (L-ch) or RT751 (R-ch) so that the reading on the voltmeter becomes 0.1mV within 30 seconds after the power turned on.

Note : It is normal that the voltage will increase as time passes.

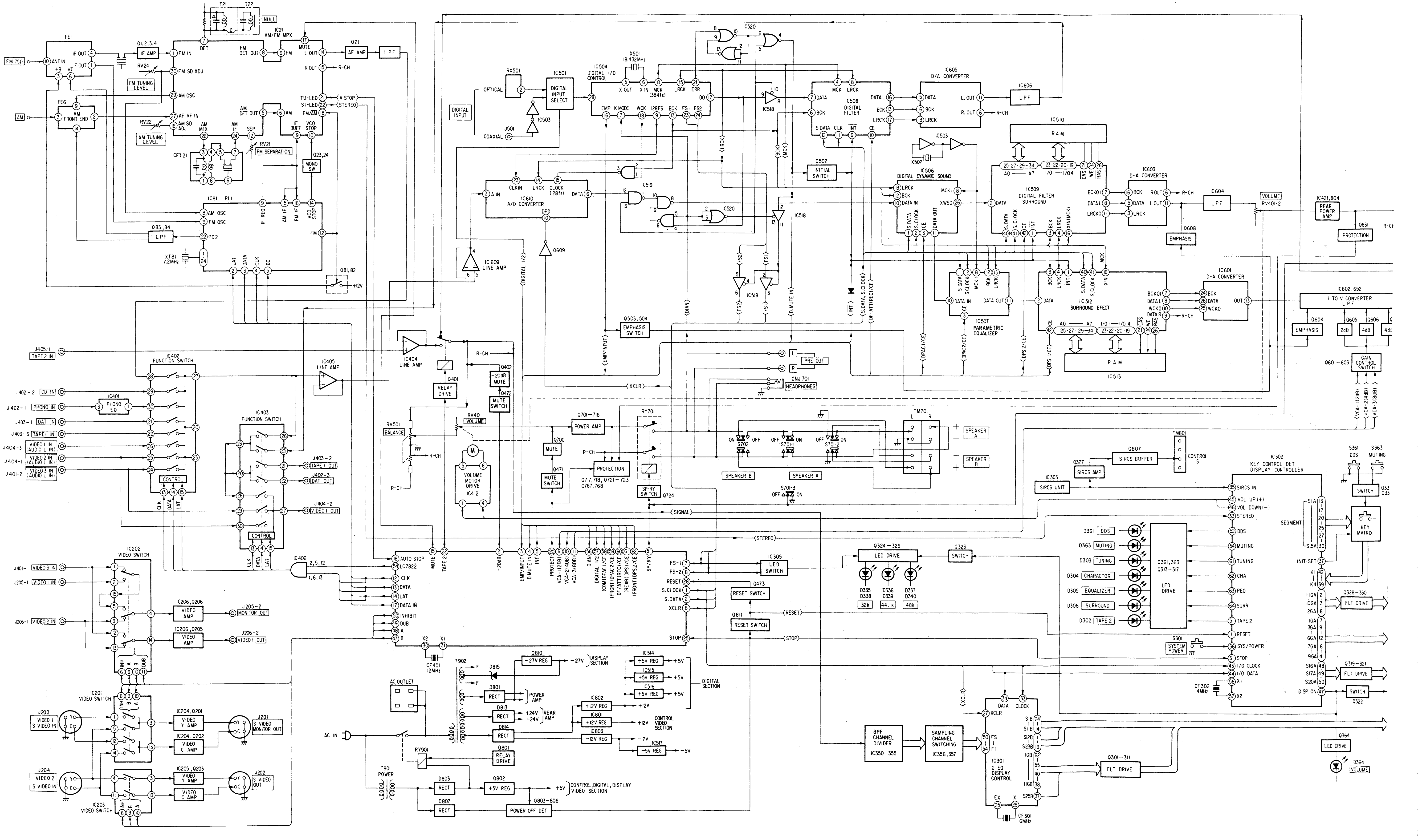
5. Turn the power off and remove the digital voltmeter.

Adjustment Location : main board

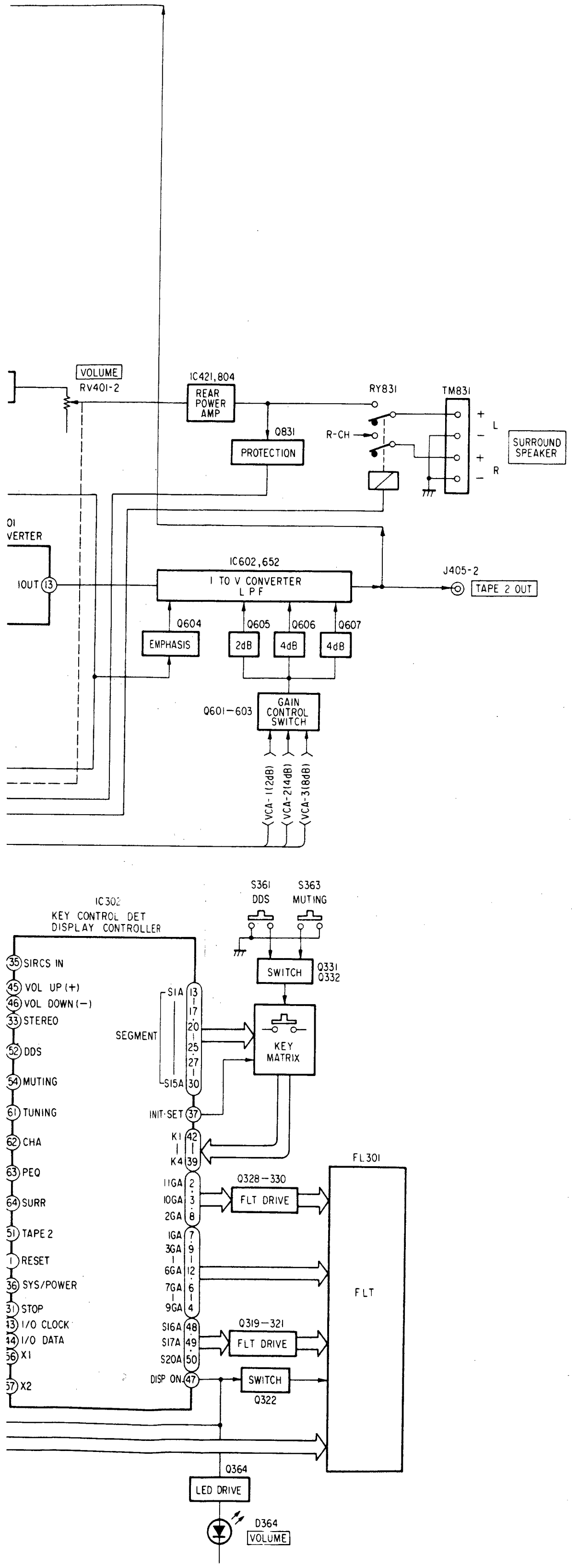

TP701
4
1
RT701
RT751

SECTION 3
DIAGRAMS

3-1. BLOCK DIAGRAM

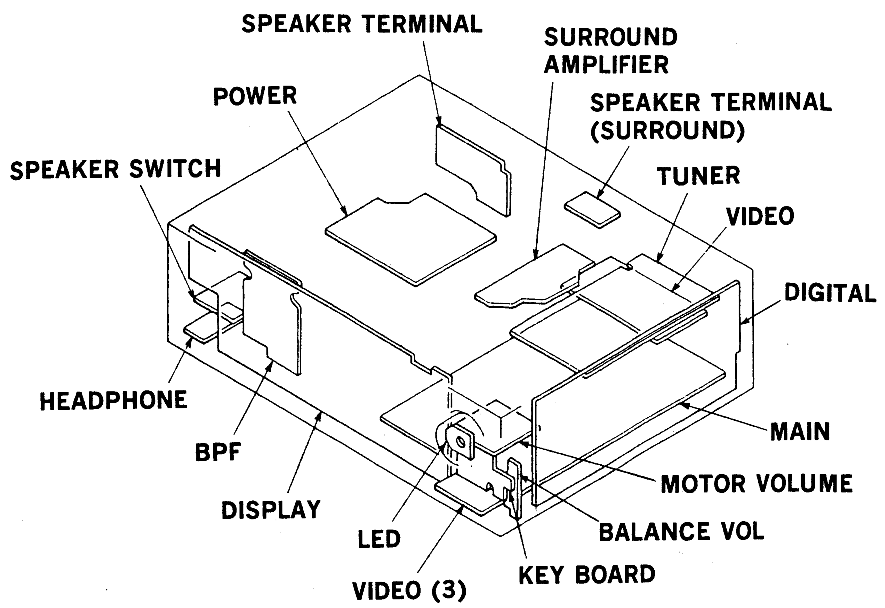


FE1
FM 75Ω
AM
FE61
AM FRONT END
IF AMP
FM TUNING LEVEL
AM TUNING LEVEL
IC21 AM/FM MPX
IC81 PLL
CFT21
T21
T22
NULL
Q21
AF AMP
LPF
MONO SW
Q23,24
Q81,82
Q83,84
XT81 7.2MHz
RV21 FM SEPARATION
RV22
RV24
IC501 DIGITAL INPUT SELECT
OPTICAL
COAXIAL
DIGITAL INPUT
RX501
J501
IC503
IC504 DIGITAL I/O CONTROL
X501 18.432MHz
IC518
IC519
IC520
Q502 INITIAL SWITCH
IC508 DIGITAL FILTER
IC605 D/A CONVERTER
IC606 LPF
IC506 DIGITAL DYNAMIC SOUND
IC509 DIGITAL FILTER SURROUND
IC510 RAM
IC513 RAM
IC507 PARAMETRIC EQUALIZER
IC512 SURROUND EFECT
IC603 D-A CONVERTER
IC601 D-A CONVERTER
IC604 LPF
Q608 EMPHASIS
VOLUME RV401-2
IC421,804 REAR POWER AMP
Q831 PROTECTION
IC602,652 I TO V CONVERTER LPF
Q604 EMPHASIS
Q605 2dB
Q606 4dB
Q601-603 GAIN CONTROL SWITCH
IC610 A/D CONVERTER
IC609 LINE AMP
Q609
Q503,504 EMPHASIS SWITCH
IC402 FUNCTION SWITCH
IC401 PHONO EQ
IC403 FUNCTION SWITCH
IC404 LINE AMP
IC405 LINE AMP
IC406
Q401 RELAY DRIVE
Q402 -20dB MUTE
Q472 MUTE SWITCH
RV401 VOLUME
RV501 BALANCE
IC412 VOLUME MOTOR DRIVE
Q700 MUTE
Q471 MUTE SWITCH
Q701-716 POWER AMP
PROTECTION
RY701
SP-RY SWITCH Q724
TM701
SPEAKER A
SPEAKER B
S702
S701-1
S701-2
S701-3
PRE OUT
CNJ 701 HEADPHONES
J405-1 TAPE 2 IN
J402-2 CD IN
J402-1 PHONO IN
J403-1 DAT IN
J403-3 TAPE1 IN
J404-3 VIDEO 1 IN (AUDIO L IN)
J404-1 VIDEO 2 IN (AUDIO L IN)
J401-2 VIDEO 3 IN (AUDIO L IN)
J403-2 TAPE 1 OUT
J402-3 DAT OUT
J404-2 VIDEO 1 OUT
IC202 VIDEO SWITCH
IC201 VIDEO SWITCH
IC203 VIDEO SWITCH
IC206,Q206 VIDEO AMP
IC206,Q205 VIDEO AMP
IC204,Q201 VIDEO Y AMP
IC204,Q202 VIDEO C AMP
IC205,Q203 VIDEO Y AMP
VIDEO C AMP
J205-2 MONITOR OUT
J206-2 VIDEO 1 OUT
J201 S VIDEO MONITOR OUT
J202 S VIDEO OUT
J203 VIDEO 1 S VIDEO IN
J204 VIDEO 2 S VIDEO IN
LC7822
AUTO STOP
CF401 12MHz
AC OUTLET
AC IN
T902
T901 POWER
RY901
Q801 RELAY DRIVE
Q810 -27V REG
D815
D801 RECT
D813 RECT
D814 RECT
D803 RECT
D807 RECT
Q802 +5V REG
POWER OFF DET
Q803-806
IC802 +12V REG
IC801 +12V REG
IC803 -12V REG
IC514 +5V REG
IC515 +5V REG
IC516 +5V REG
IC517 -5V REG
DISPLAY SECTION
POWER AMP
REAR AMP
DIGITAL SECTION
CONTROL VIDEO SECTION
CONTROL, DIGITAL, DISPLAY VIDEO SECTION
IC305 LED SWITCH
Q473 RESET SWITCH
Q811 RESET SWITCH
Q324-326 LED DRIVE
D335 D338 32k
D336 D339 44.1k
D337 D340 48k
Q323 SWITCH
IC303 SIRCS UNIT
Q327 SIRCS AMP
Q807 SIRCS BUFFER
TM801 CONTROL S
IC302 KEY CONTROL DET DISPLAY CONTROLLER
S361 DDS
S363 MUTING
Q331 Q332 SWITCH
KEY MATRIX
SEGMENT
D361 DDS
D363 MUTING
D303 TUNING
D304 CHARACTOR
D305 EQUALIZER
D306 SURROUND
D302 TAPE 2
Q361,363 Q313-317 LED DRIVE
S301 SYSTEM POWER
CF302 4MHz
Q328-330 FLT DRIVE
Q319-321 FLT DRIVE
Q322 SWITCH
Q364 LED DRIVE
D364 VOLUME
BPF CHANNEL DIVIDER IC350-355
SAMPLING CHANNEL SWITCHING IC356,357
IC301 G EQ DISPLAY CONTROL
CF301 6MHz
Q301-311 FLT DRIVE



VOLUME
RV401-2
IC421,804
REAR POWER AMP
Q831
PROTECTION
RY831
TM831
R-CH
L
R
SURROUND SPEAKER
IC602,652
I TO V CONVERTER
LPF
J405-2
TAPE 2 OUT
IOUT 13
Q604
EMPHASIS
Q605
2dB
Q606
4dB
Q607
4dB
Q601—603
GAIN CONTROL SWITCH
VCA-1(2dB)
VCA-2(4dB)
VCA-3(8dB)
IC302
KEY CONTROL DET
DISPLAY CONTROLLER
35 SIRCS IN
45 VOL UP(+)
46 VOL DOWN(−)
33 STEREO
52 DDS
54 MUTING
61 TUNING
62 CHA
63 PEQ
64 SURR
51 TAPE 2
1 RESET
36 SYS/POWER
31 STOP
43 I/O CLOCK
44 I/O DATA
56 X1
57 X2
SEGMENT
S1A
S15A
INIT·SET 37
K1
K4
11GA
10GA
2GA
1GA
3GA
6GA
7GA
9GA
S16A
S17A
S20A
DISP ON 47
S361 DDS
S363 MUTING
SWITCH
Q331
Q332
KEY MATRIX
Q328—330
FLT DRIVE
Q319—321
FLT DRIVE
SWITCH
Q322
FL301
FLT
Q364
LED DRIVE
D364
VOLUME

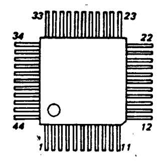
3-2. CIRCUIT BOARDS LOCATION



SPEAKER TERMINAL
SURROUND AMPLIFIER
POWER
SPEAKER TERMINAL (SURROUND)
SPEAKER SWITCH
TUNER
VIDEO
DIGITAL
HEADPHONE
MAIN
BPF
MOTOR VOLUME
DISPLAY
BALANCE VOL
LED
KEY BOARD
VIDEO (3)

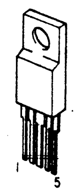
•Semiconductor Lead Layouts

CXD1355Q

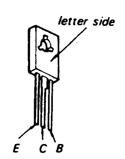


33
23
34
22
44
12
1
11

S1-18752

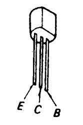


2SA1142
2SC2682

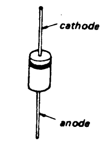


letter side
E C B

2SC1841PA
2SC3622AK

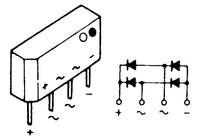


10E2N
HZ4ALL
US1060M

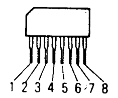


cathode
anode

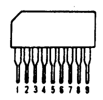
SIVB40



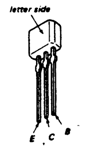
M5218L



µPC4570HA-1

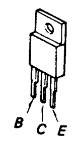


2SA1175HFE
2SC2785HFE

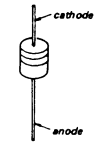


letter side
E C B

2SC3851-0
2SD2012

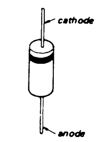


HZS6C3L
UZL-7L
UZL-27M



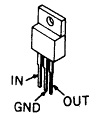
cathode
anode

UZP-5.6B

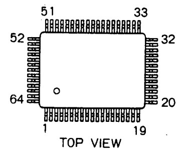


cathode
anode

M5F7805
M5F78M12

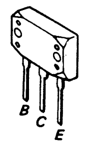


µPD75216AGF-573-3BE

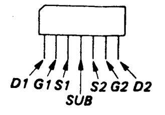


51
33
52
32
64
20
1
19
TOP VIEW

2SA1215
2SC2921M0

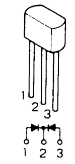


2SK389-GR

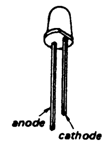


D1 G1 S1 S2 G2 D2
SUB

MC921

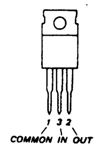


SEL1510C-C
SEL1810W
SEL1810W-C
SEL2510W



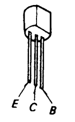
anode
cathode

M5F79M05
M5F79M12

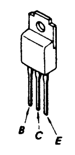


1 3 2
COMMON IN OUT

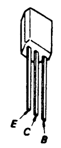
2SA988F



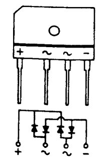
2SA1684
2SC4431



DTA124ES
DTC124ES



RBV-602-01



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D361	H-32	D772	C-11	Q472	H-13
D363	H-30	D773	C-12	Q473	G-17
D402	E-10	D774	C-12	Q700	E-16
D403	F-18	D775	C-12	Q701	D-17
D404	G-16	D776	C-12	Q702	D-17
D405	G-17	D777	C-12	Q703	D-17
D406	G-14	D778	C-12	Q704	D-17
D407	F-16	D801	D-2	Q705	D-17
D408	H-17	D802	G-4	Q706	D-18
D410	F-28	D803	G-1	Q707	D-18
D701	D-17	D807	F-2	Q708	D-17
D702	D-17	D808	F-4	Q709	B-17
D703	D-17	D809	F-2	Q711	C-18
D704	D-18	D810	F-2	Q712	C-16
D705	D-18	D811	J-5	Q713	C-18
D706	D-17	D812	C-19	Q714	C-16
D707	D-17	D813	F-19	Q715	B-18
D708	C-17	D814	G-18	Q716	B-16
D709	C-17	D816	G-17	Q717	C-19
D710	D-19	D817	E-15	Q718	D-16
D711	C-16	D818	E-14	Q721	D-18
D712	F-16	D831	C-4	Q722	E-17
D713	C-18	D832	B-25	Q723	E-17
D714	C-18	D833	B-25	Q724	F-17
D715	C-18	D881	C-3	Q750	E-13
D716	C-18			Q751	D-12
D717	F-16	IC201	G-22	Q752	D-12
D718	E-17	IC202	I-22	Q753	D-12
D719	E-17	IC203	E-22	Q754	D-12
D720	E-17	IC204	G-23	Q755	D-12
D721	C-18	IC205	E-23	Q756	D-11
D722	C-18	IC206	I-23	Q757	D-11
D723	C-17	IC401	I-10	Q758	D-11
D724	C-17	IC402	G-11	Q759	B-12
D725	C-17	IC403	G-12	Q761	C-11
D726	C-17	IC404	D-10	Q762	C-13
D727	C-17	IC405	F-11	Q763	C-11
D728	C-17	IC406	F-13	Q764	C-13
D751	D-12	IC411	G-15	Q765	B-11
D752	D-12	IC412	H-30	Q766	B-13
D753	D-12			Q767	C-10
D754	D-11	Q201	G-23	Q768	D-13
D755	D-11	Q202	G-23	Q801	G-4
D756	D-12	Q203	F-23	Q802	F-4
D757	D-12	Q204	E-23	Q803	F-2
D758	C-12	Q205	H-23	Q804	F-2
D759	C-12	Q206	I-23	Q805	F-3
D760	D-10	Q361	I-31	Q806	F-3
D761	C-13	Q363	I-31	Q807	J-5
D763	C-11	Q364	H-31	Q810	C-19
D764	C-11	Q401	E-10	Q811	G-18
D765	C-11	Q402	E-10	Q831	C-4
D766	C-11	Q452	E-10	Q832	B-25
D771	C-11	Q471	H-13	Q881	C-3

3-3. PRINTED WIRING BOARDS
—PRE, MAIN AMP/POWER SECTION—

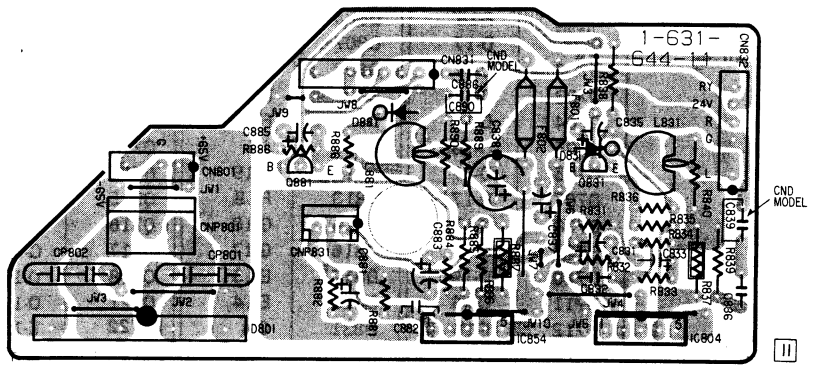
- **Refer to page 19 for Semiconductor Lead Layouts.**
- **Refer to page 20 for Semiconductor Location.**

Note:

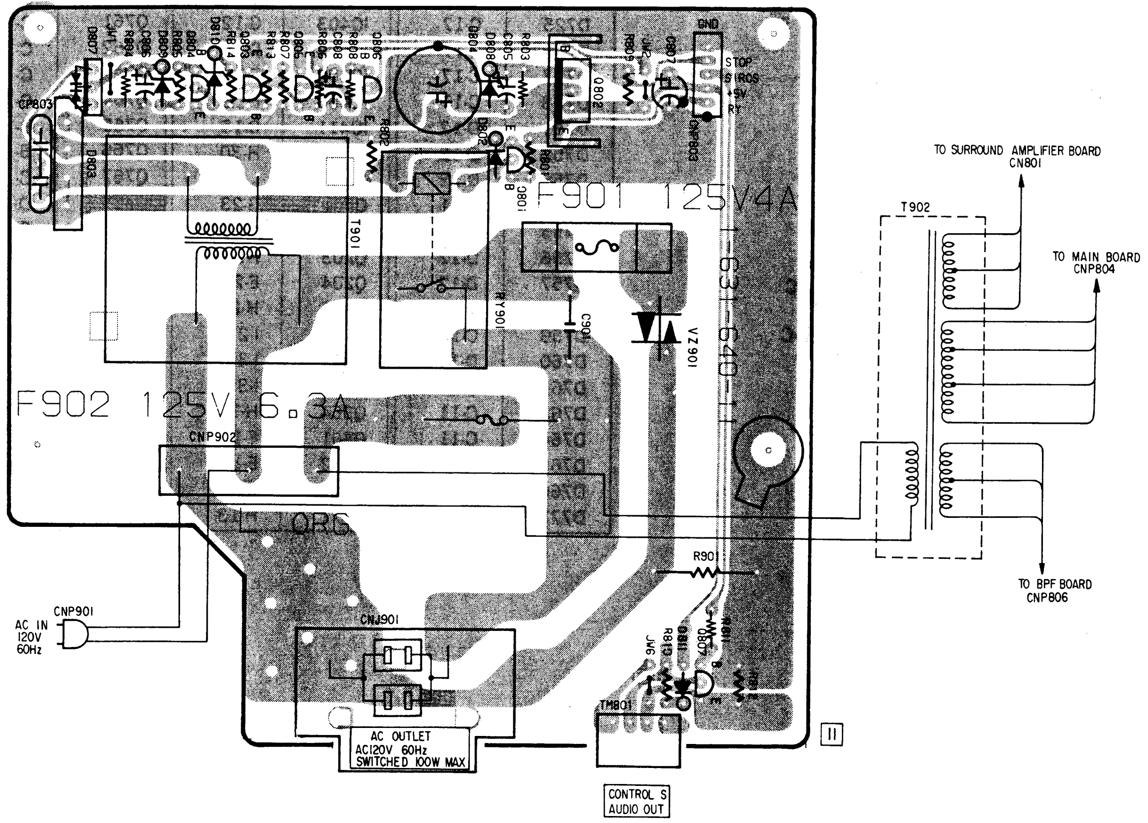
- ■ : parts mounted on the conductor side.

CND: Canadian

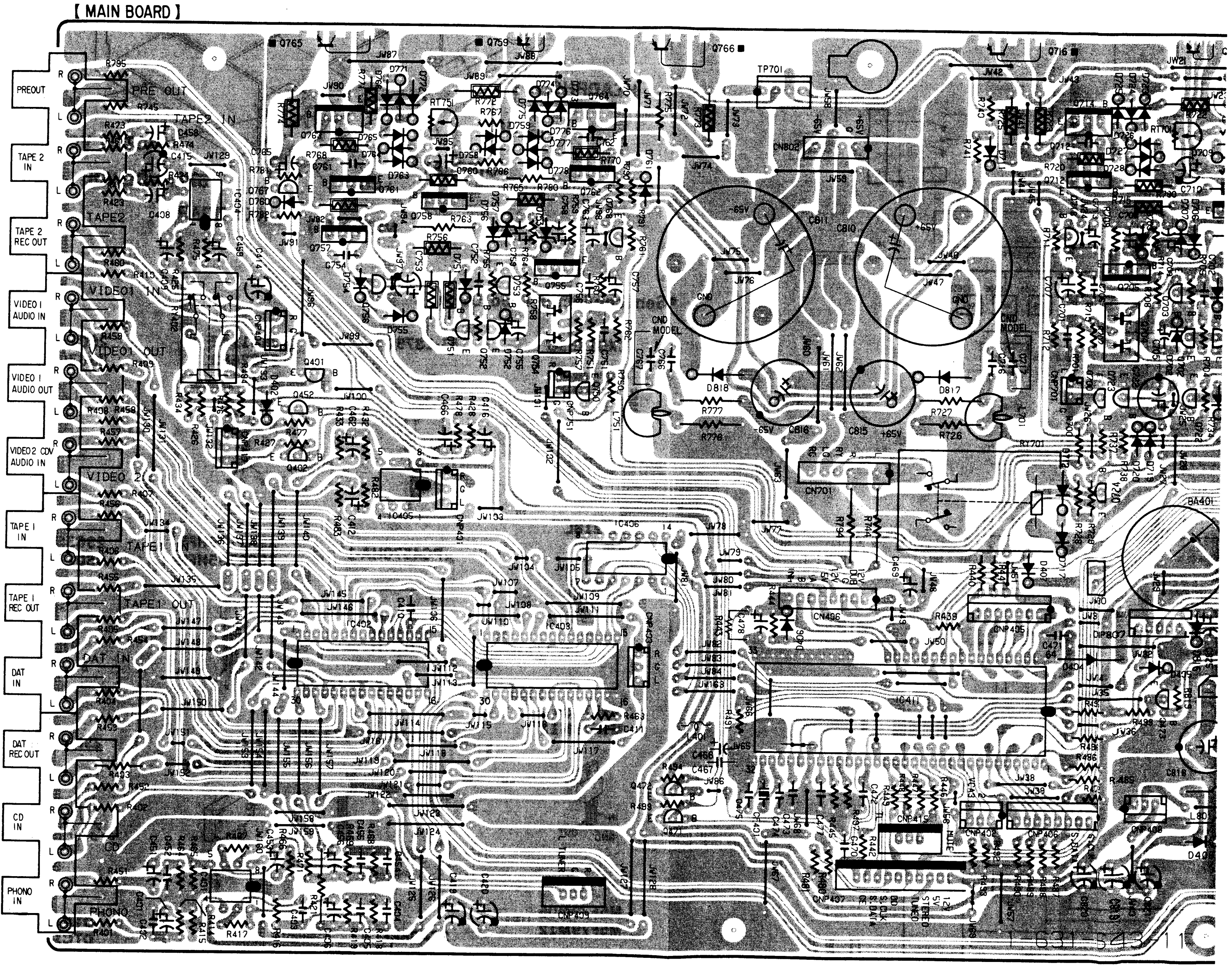
【 SURROUND AMPLIFIER BOARD 】


1-631-644-11
CND MODEL
CN801
CN831
CNP801
CNP802
CNP831
IC804
IC854
Q801
Q881
L831
II

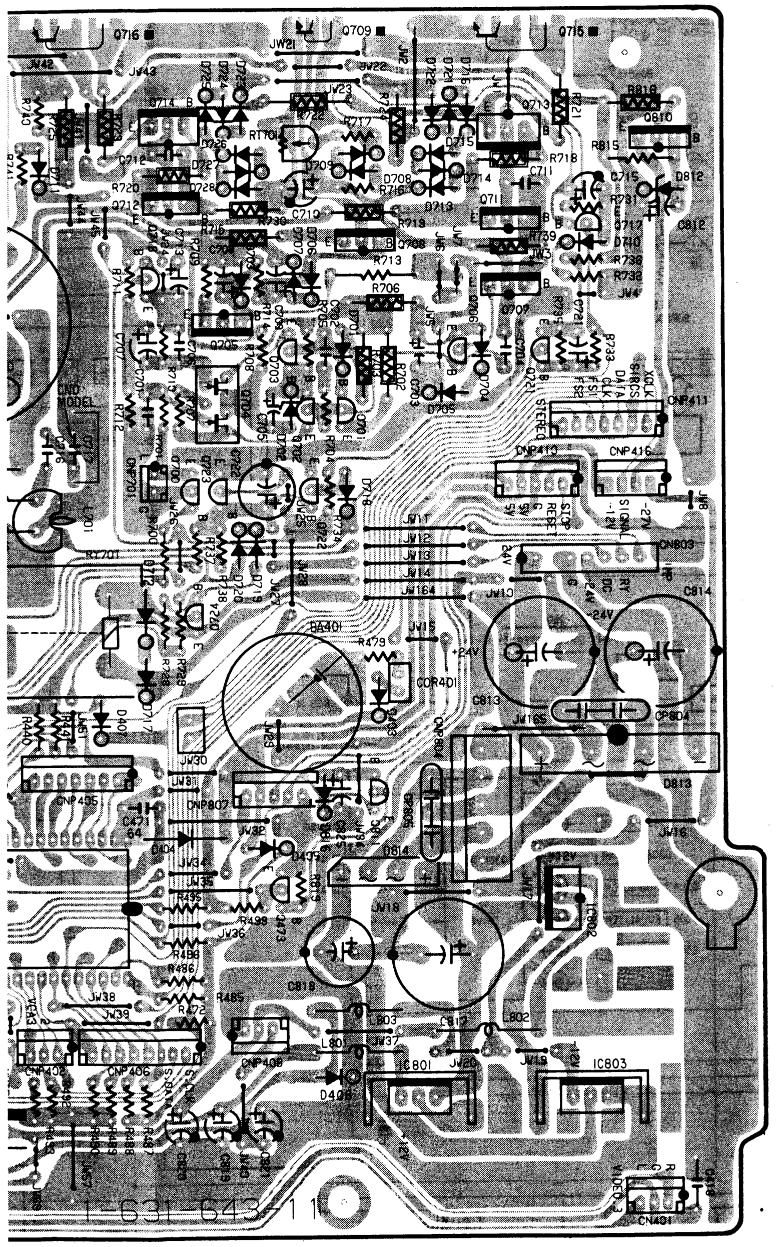
【 POWER BOARD 】


F901 125V4A
F902 125V 6.3A
1-631-640-11
T901
T902
VZ901
RY901
C901
R901
CNP902
CNP901
AC IN 120V 60Hz
CNJ901
AC OUTLET AC120V 60Hz SWITCHED 100W MAX
TM801
CONTROL S AUDIO OUT
STOP
SIRCS
+5V
RY
GND
TO SURROUND AMPLIFIER BOARD CN801
TO MAIN BOARD CNP804
TO BPF BOARD CNP806
II

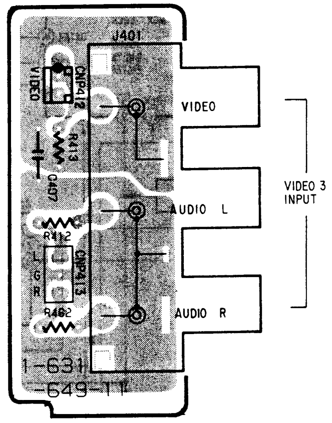
【 MAIN BOARD 】


PREOUT
TAPE 2 IN
TAPE 2 REC OUT
VIDEO 1 AUDIO IN
VIDEO 1 AUDIO OUT
VIDEO 2 CDV AUDIO IN
TAPE 1 IN
TAPE 1 REC OUT
DAT IN
DAT REC OUT
CD IN
PHONO IN
J405
J404
J403
J402
PRE OUT
TAPE2 IN
TAPE2
VIDEO1 IN
VIDEO1 OUT
VIDEO 2
TAPE1
TAPE1 OUT
DAT
PHONO
-65V
+65V
CND MODEL
TP701
CN701
IC405
IC402
IC403
IC406
IC411
BA401
1-631-643-11

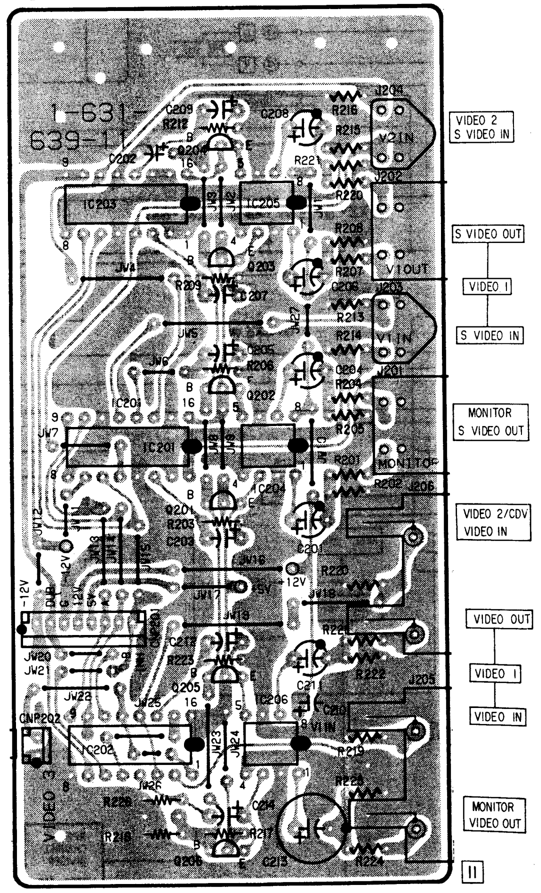
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33


Q716
Q709
Q715
R816
Q810
D812
BR401
R479
COR401
C813
C814
CP804
D813
CNP411
CNP416
CNP410
CN803
CNP405
CNP807
C818
IC801
IC803
L801
L802
L803
D406
CNP406
CNP408
CN401
GND
MODEL
1-631-643-11

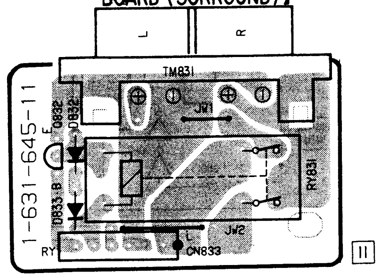
【VIDEO (3) BOARD】


J401
VIDEO
AUDIO L
AUDIO R
VIDEO 3
INPUT
R413
R412
R402
1-631-649-11

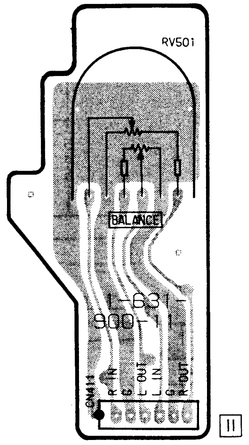
【VIDEO BOARD】


1-631-639-11
IC203
IC205
IC201
IC202
J201
J202
J203
J204
J205
J206
VIDEO 2
S VIDEO IN
S VIDEO OUT
VIDEO 1
S VIDEO IN
MONITOR
S VIDEO OUT
VIDEO 2/CDV
VIDEO IN
VIDEO OUT
VIDEO 1
VIDEO IN
MONITOR
VIDEO OUT
CNP202
-12V
+12V
II

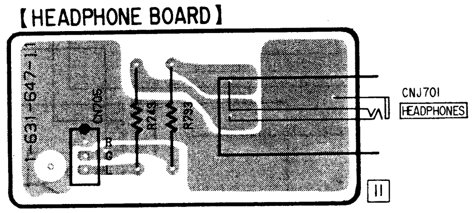
【SPEAKER TERMINAL BOARD (SURROUND)】


L
R
TM831
RY831
D832
D833
CN833
JW1
JW2
1-631-645-11
II

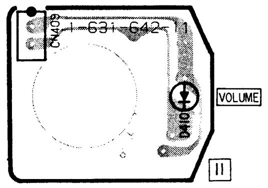
【BALANCE VOL BOARD】


RV501
BALANCE
1-631-800-11
CN411
II

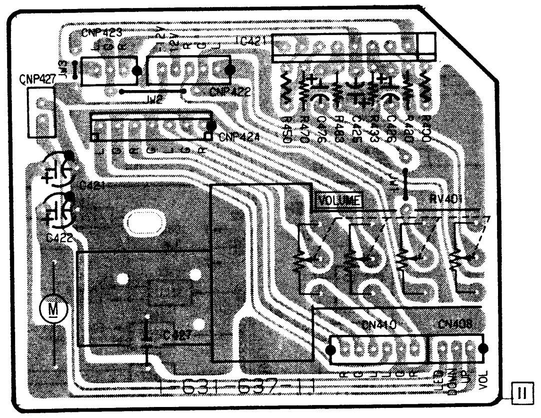
【HEADPHONE BOARD】


1-631-647-11
CNJ701
HEADPHONES
II

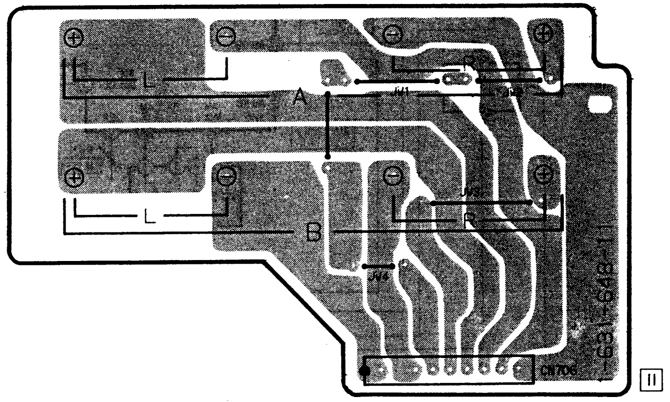
【VOL LED BOARD】


1-631-642-11
CN409
VOLUME
II

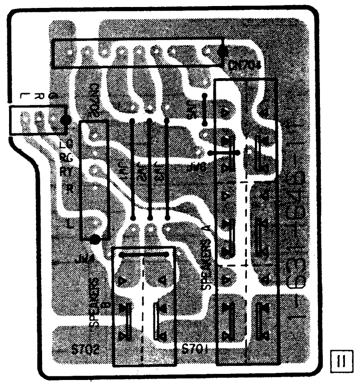
【MOTOR VOLUME BOARD】


CNP423
IC421
CNP427
CNP422
CNP424
VOLUME
RV401
M
CN410
CN408
VOL
1-631-637-11
II

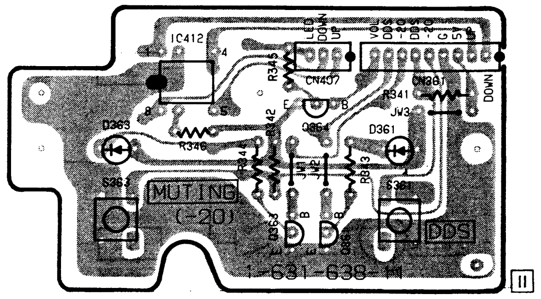
【SPEAKER TERMINAL BOARD】


L
A
B
CN702
1-631-641-11
II

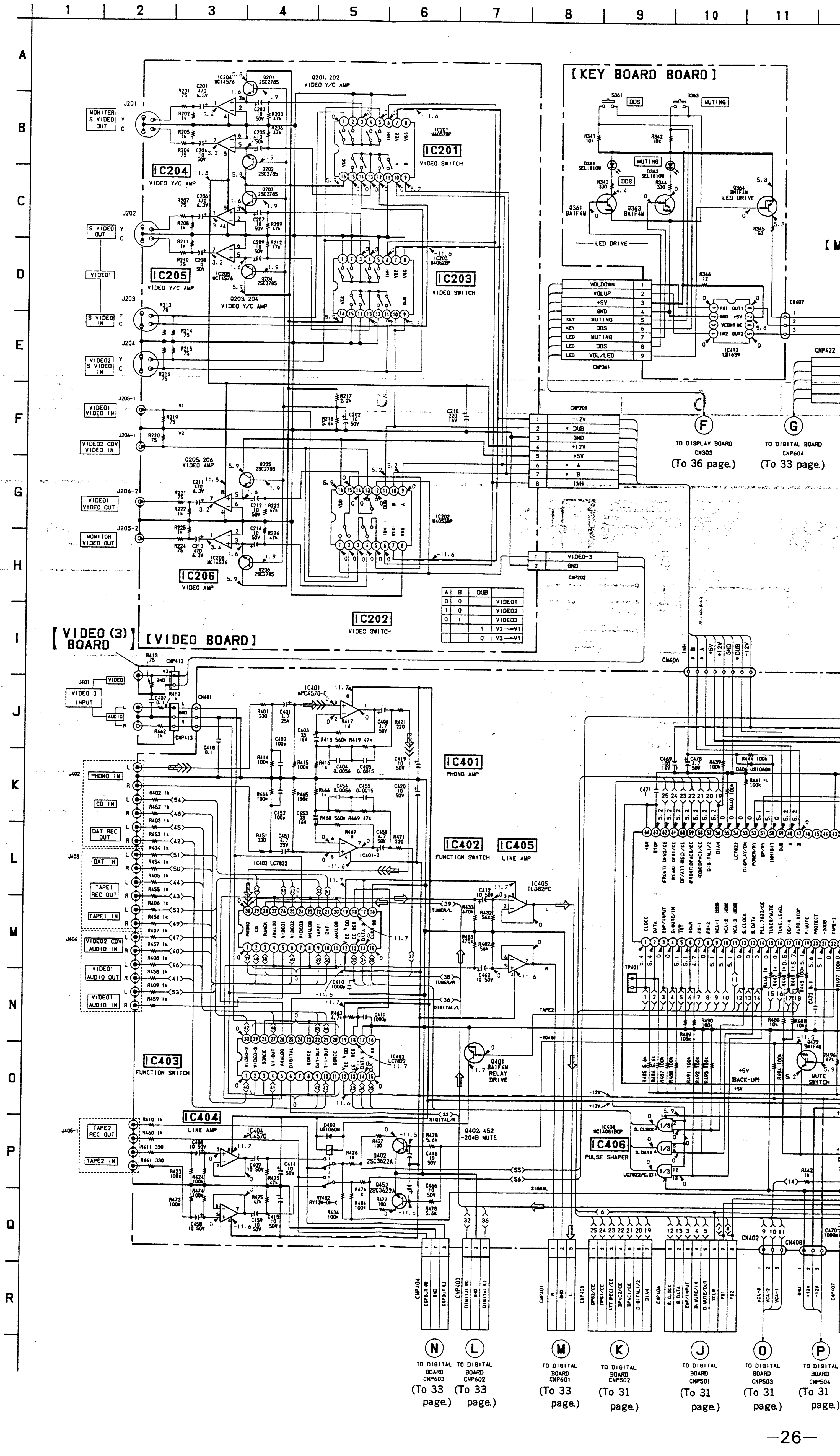
【SPEAKER SWITCH BOARD】


CN704
S702
S701
II

【KEY BOARD BOARD】


IC412
CN407
CN361
D363
D364
D361
MUTING
(-20)
DDS
DOWN
1-631-638-11
II

3-4. SCHEMATIC DIAGRAM
—PRE, MAIN AMP/POWER SECTION—



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11
A
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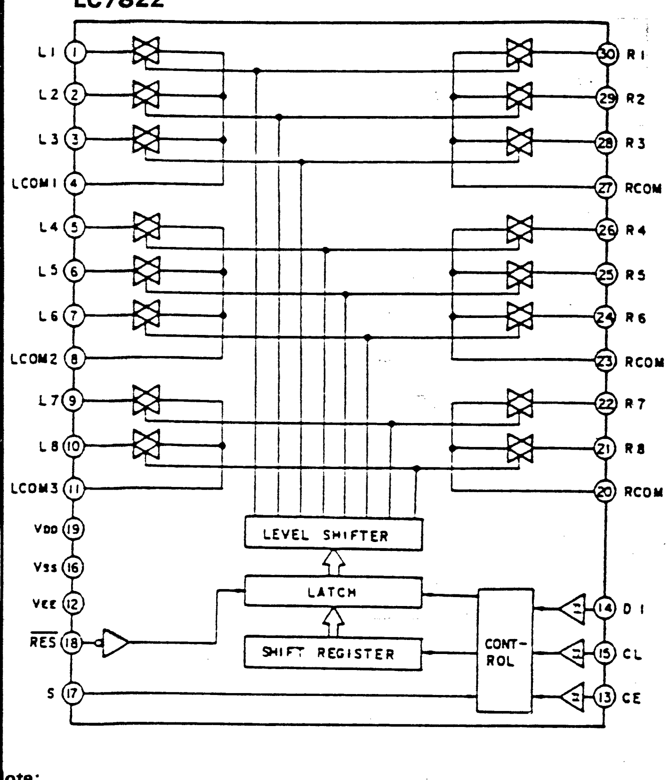
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
[KEY BOARD BOARD]
[VIDEO BOARD]
[VIDEO (3) BOARD]
IC201 VIDEO SWITCH
IC202 VIDEO SWITCH
IC203 VIDEO SWITCH
IC204 VIDEO Y/C AMP
IC205 VIDEO Y/C AMP
IC206 VIDEO AMP
IC401 PHONO AMP
IC402 FUNCTION SWITCH
IC403 FUNCTION SWITCH
IC404 LINE AMP
IC405 LINE AMP
IC406 PULSE SHAPER
Q201, 202 VIDEO Y/C AMP
Q203, 204 VIDEO Y/C AMP
Q205, 206 VIDEO AMP
Q401 RELAY DRIVE
Q402, 452 -20dB MUTE
MONITER S VIDEO OUT
S VIDEO OUT
VIDEO1
S VIDEO IN
VIDEO2 S VIDEO IN
VIDEO1 VIDEO IN
VIDEO2 CDV VIDEO IN
VIDEO1 VIDEO OUT
MONITOR VIDEO OUT
VIDEO 3 INPUT
PHONO IN
CD IN
DAT REC OUT
DAT IN
TAPE1 REC OUT
TAPE1 IN
VIDEO2 CDV AUDIO IN
VIDEO1 AUDIO OUT
VIDEO1 AUDIO IN
TAPE2 REC OUT
TAPE2 IN
DDS
MUTING
LED DRIVE
VOLDOWN
VOLUP
+5V
GND
MUTING
DDS
VOL/LED
CNP361
-12V
DUB
+12V
A
B
INH
CNP201
VIDEO-3
CNP202
A B DUB
0 0 VIDEO1
1 0 VIDEO2
0 1 VIDEO3
1 V2→V1
0 V3→V1
TO DISPLAY BOARD CN303 (To 36 page.)
TO DIGITAL BOARD CNP604 (To 33 page.)
TO DIGITAL BOARD CNP603 (To 33 page.)
TO DIGITAL BOARD CNP602 (To 33 page.)
TO DIGITAL BOARD CNP601 (To 33 page.)
TO DIGITAL BOARD CNP502 (To 31 page.)
TO DIGITAL BOARD CNP501 (To 31 page.)
TO DIGITAL BOARD CNP503 (To 31 page.)
TO DIGITAL BOARD CNP504 (To 31 page.)
F
G
N
L
M
K
J
O
P

• IC Block Diagrams

IC402, 403
LC7822



L1
L2
L3
LCOM1
L4
L5
L6
LCOM2
L7
L8
LCOM3
VDD
VSS
VEE
RES
S
R1
R2
R3
RCOM
R4
R5
R6
RCOM
R7
R8
RCOM
D I
CL
CE
LEVEL SHIFTER
LATCH
SHIFT REGISTER
CONT-ROL

ote:

All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.

All resistors are in Ω and ¹/₄W or less unless otherwise specified.

% : indicates tolerance.

△ : internal component.

⊡ : nonflammable resistor.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

▬▬ : B+ Line

▬ ▬ ▬ : B− Line

Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.

no mark : FM

Voltages are taken with a VOM (Input Impedance 10MΩ).
Voltage variations may be noted due to normal production tolerances.

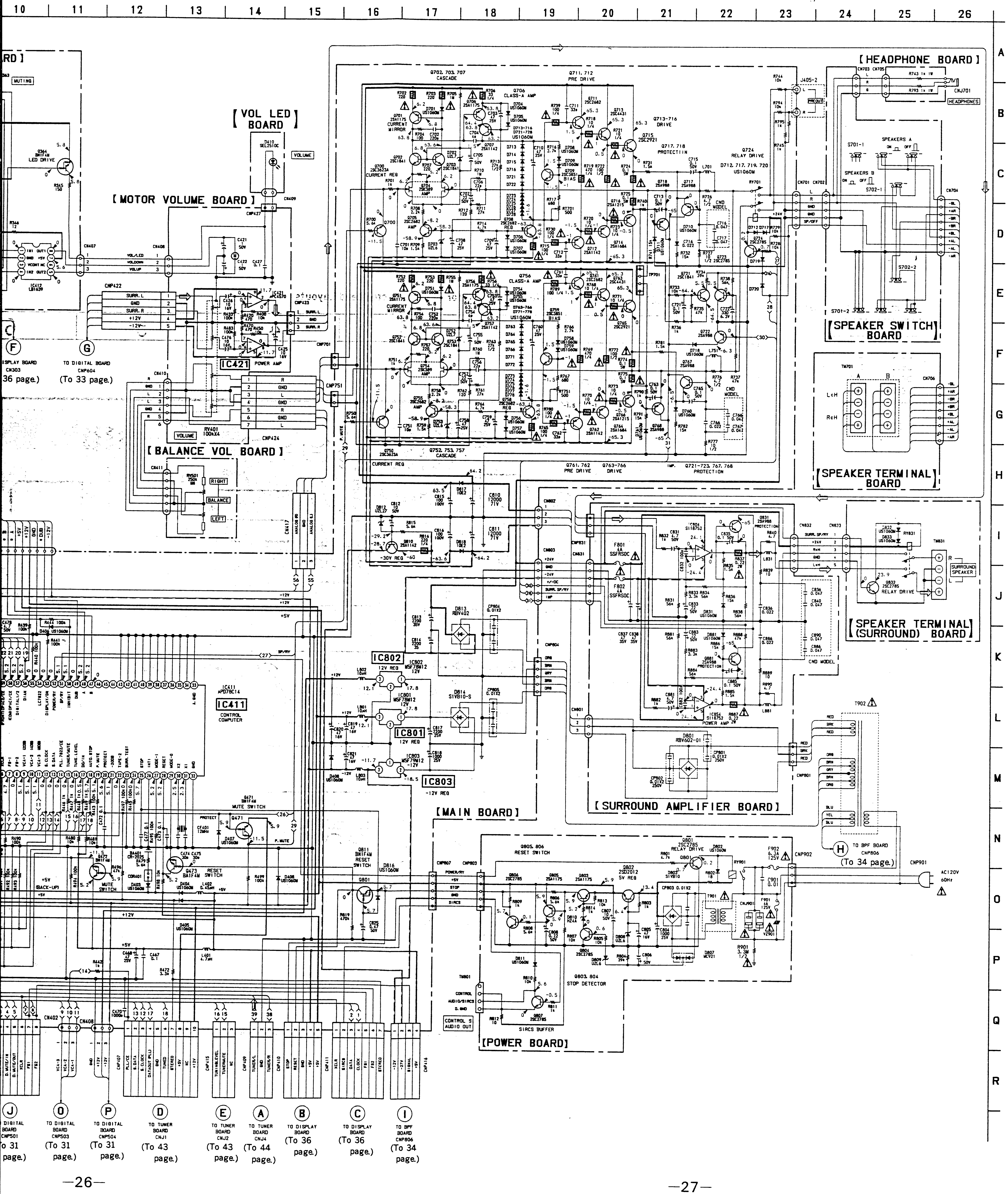
* : Impossible to measure the voltage at the marked points.

Signal path.

⇨ : FM

⇛ : PHONO

ND: Canadian


[HEADPHONE BOARD]
HEADPHONES
[VOL LED BOARD]
[MOTOR VOLUME BOARD]
[BALANCE VOL BOARD]
[SPEAKER SWITCH BOARD]
[SPEAKER TERMINAL BOARD]
[SPEAKER TERMINAL (SURROUND) BOARD]
[SURROUND AMPLIFIER BOARD]
[MAIN BOARD]
[POWER BOARD]
IC421 POWER AMP
IC411 CONTROL COMPUTER
IC802 12V REG
IC801 12V REG
IC803 -12V REG
Q702, 703, 707 CASCADE
Q711, 712 PRE DRIVE
Q713-716 DRIVE
Q717, 718 PROTECTION
Q724 RELAY DRIVE
Q752, 753, 757 CASCADE
Q761, 762 PRE DRIVE
Q763-766 DRIVE
Q721-723, 767, 768 PROTECTION
Q805, 806 RESET SWITCH
Q801 2SC2785 RELAY DRIVE
Q802 2SD2012 5V REG
Q803, 804 STOP DETECTOR
SIRCS BUFFER
Q471 MUTE SWITCH
Q473 RESET SWITCH
Q472 MUTE SWITCH
AC120V 60Hz
TO DISPLAY BOARD CN303 (To 36 page)
TO DIGITAL BOARD CNP604 (To 33 page)
TO BPF BOARD CNP806 (To 34 page)
TO DIGITAL BOARD CNP501 (To 31 page)
TO DIGITAL BOARD CNP503 (To 31 page)
TO DIGITAL BOARD CNP504 (To 31 page)
TO TUNER BOARD CNJ1 (To 43 page)
TO TUNER BOARD CNJ2 (To 43 page)
TO TUNER BOARD CNJ4 (To 44 page)
TO DISPLAY BOARD (To 36 page)
TO DISPLAY BOARD (To 36 page)
TO BPF BOARD CNP806 (To 34 page)

3-5. PRINTED WIRING BOARD
—DIGITAL SECTION—

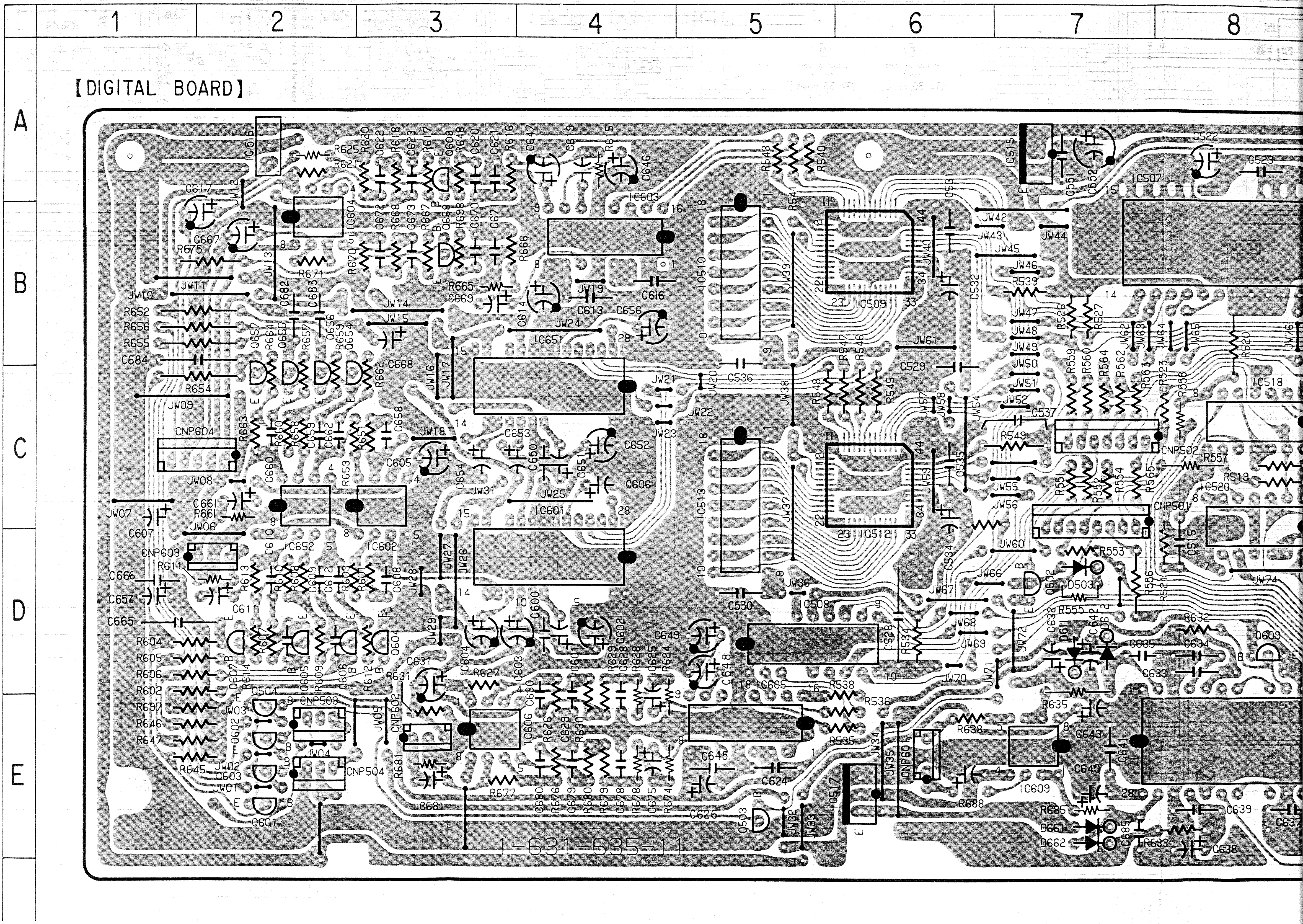
• Refer to page 20 for Semiconductor Lead Layouts

• Semiconductor Location

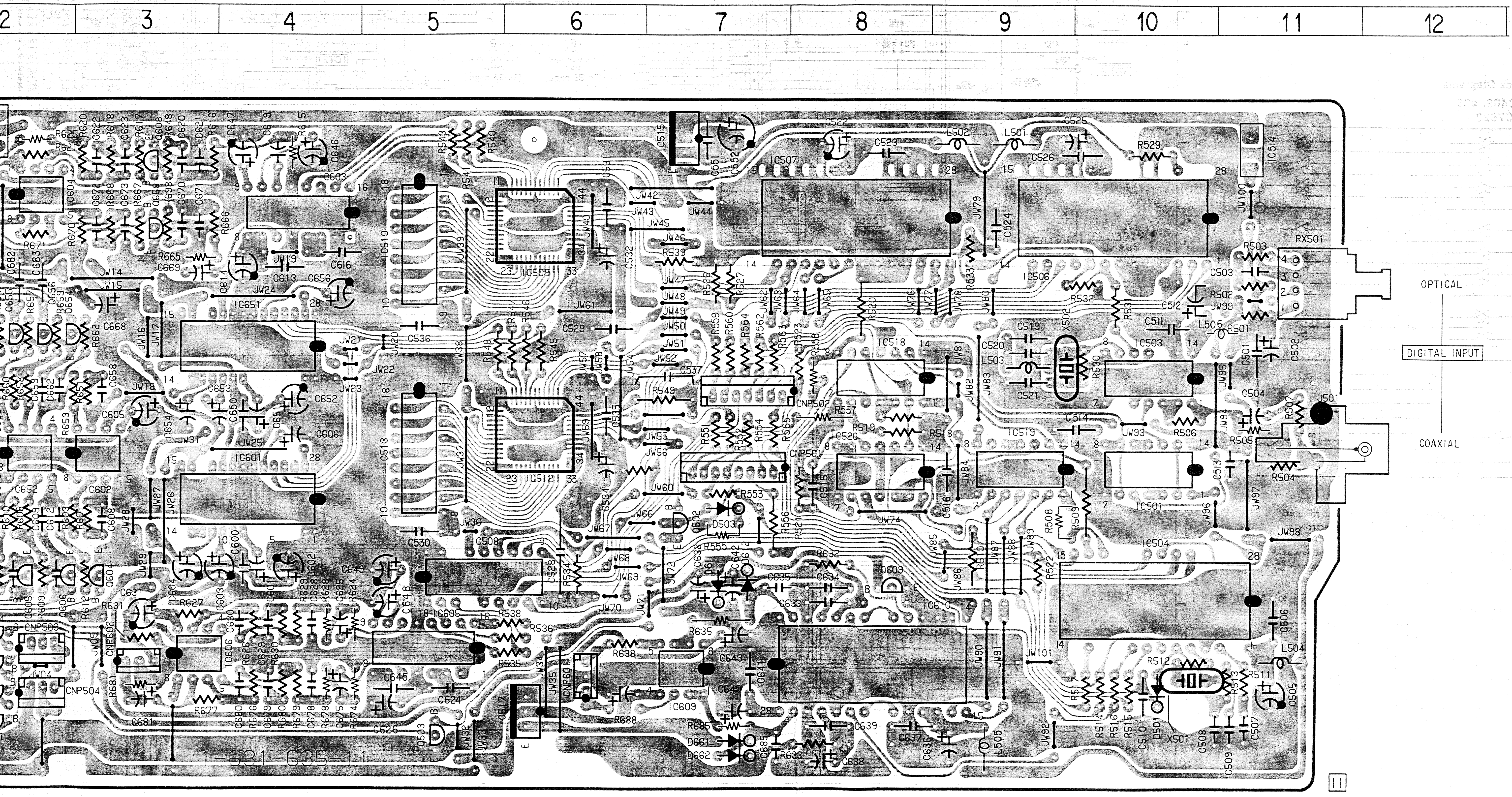
Ref. No.	Location
D501	E-10
D503	D-7
D611	D-7
D612	D-7
D661	E-8
D662	E-8
IC501	C-10
IC503	C-10
IC504	D-10
IC506	B-10
IC507	B-8
IC508	D-5
IC509	B-6
IC510	B-5
IC512	C-6
IC513	C-5
IC514	A-11
IC515	A-7
IC516	A-2
IC517	E-6
IC518	C-8
IC519	C-9
IC520	C-8
IC601	C-4
IC602	C-3
IC603	B-4
IC604	A-2
IC605	D-5
IC606	E-3
IC609	E-7
IC610	E-8
IC651	B-4
IC652	C-2
Q502	D-7
Q503	E-5
Q504	D-2
Q601	E-2
Q602	E-2
Q603	E-2
Q604	D-3
Q605	D-2
Q606	D-2
Q607	D-2
Q608	A-3
Q609	D-8
Q654	B-3
Q655	B-2
Q656	B-2
Q657	B-2
Q658	B-3

Note:

- ■ : parts mounted on the conductor side.

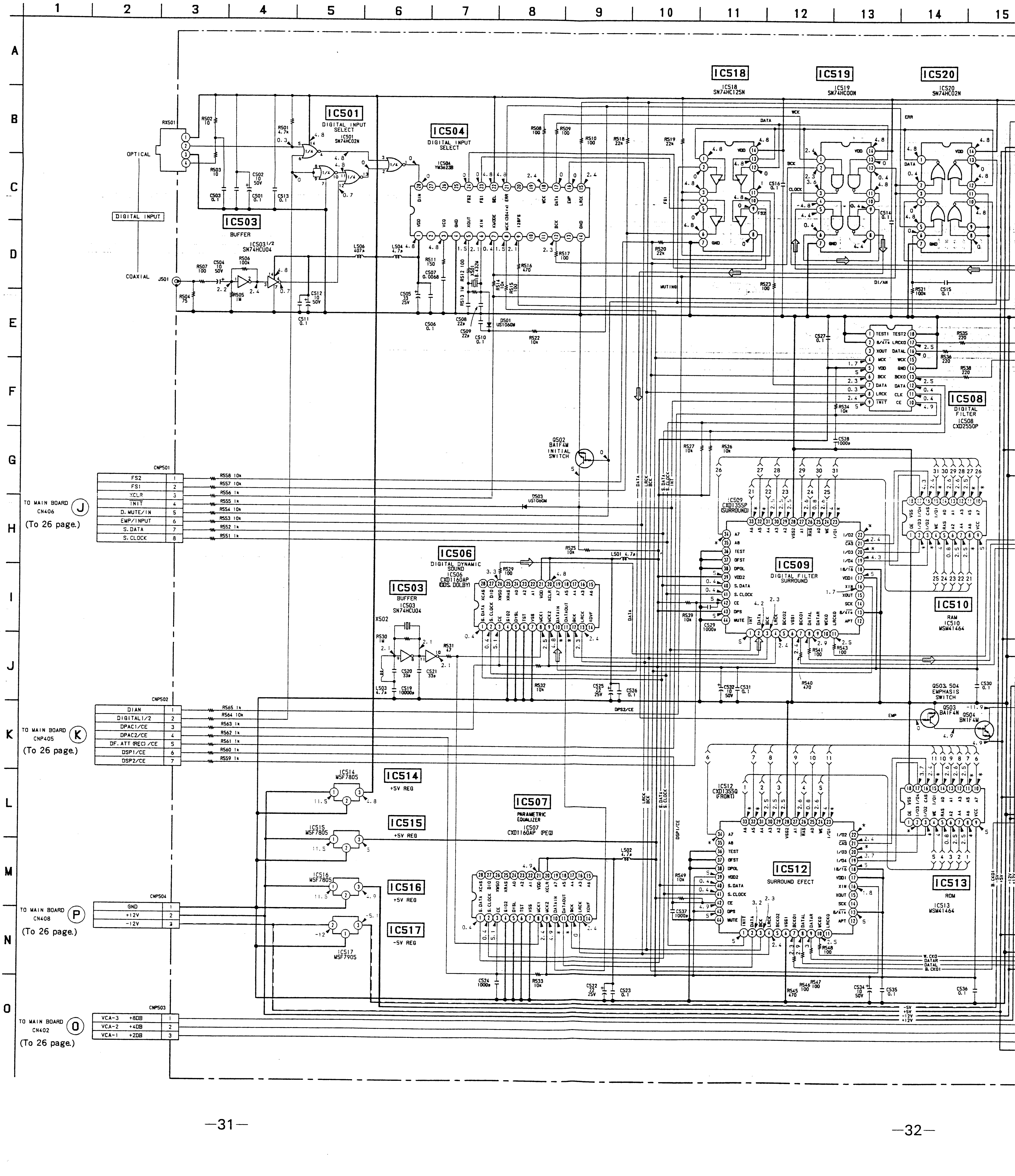

1
2
3
4
5
6
7
8
A
B
C
D
E
【DIGITAL BOARD】
IC501
IC507
IC509
IC510
IC512
IC513
IC508
IC518
IC520
IC601
IC602
IC603
IC604
IC605
IC606
IC609
IC651
IC652
CNP501
CNP502
CNP503
CNP504
CNP601
CNP602
CNP603
CNP604
D503
D661
D662
Q502
Q503
Q504
Q601
Q602
Q603
Q609
1-631-635-11

fer to page 20 for Semiconductor Lead Layouts

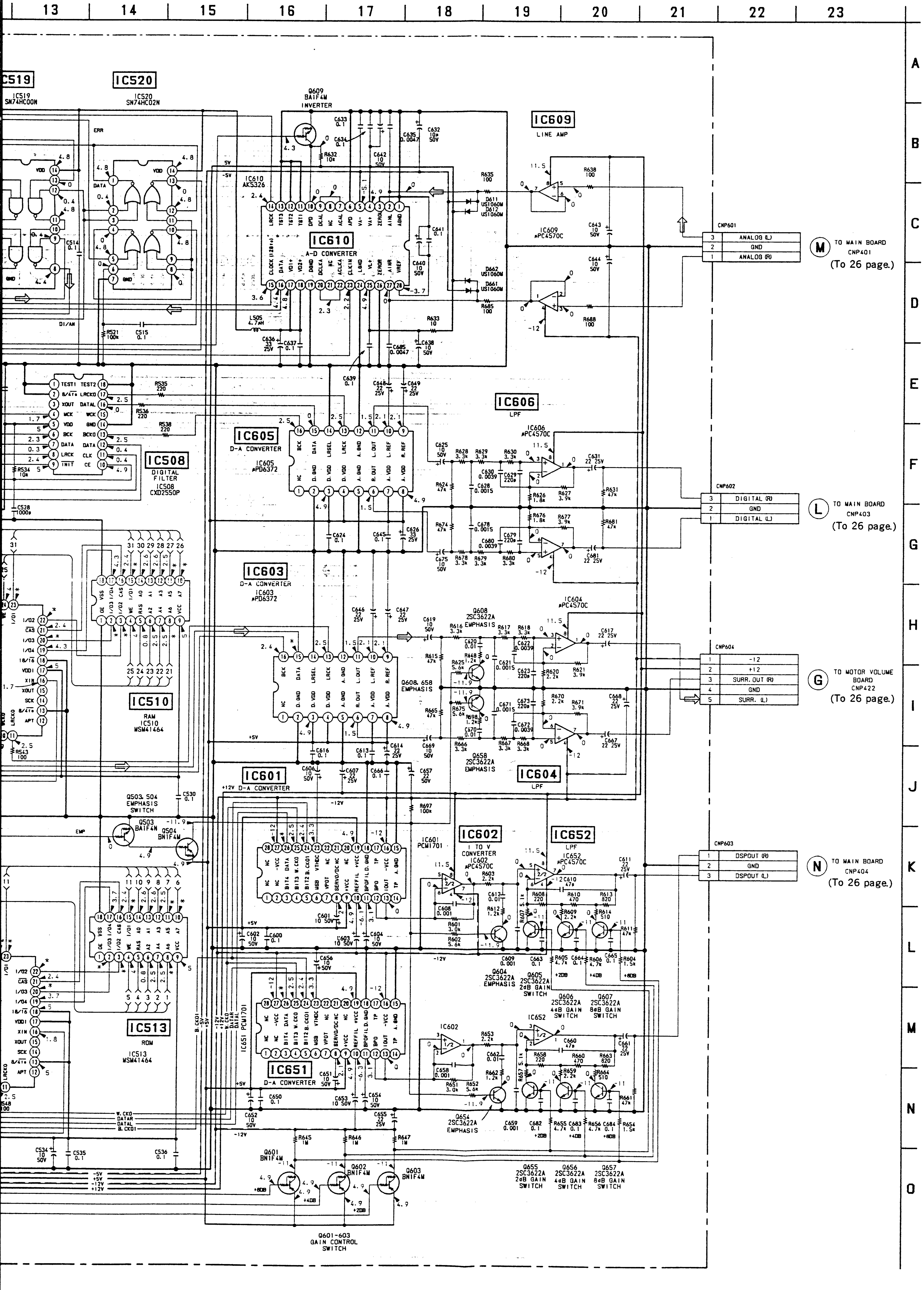

2
3
4
5
6
7
8
9
10
11
12
IC501
IC502
IC503
IC504
IC505
IC506
IC507
IC508
IC509
IC510
IC512
IC513
IC514
IC515
IC518
IC519
IC520
IC601
IC602
IC603
IC604
IC606
IC609
IC610
IC651
CNP501
CNP502
CNP503
CNP504
CNP601
CNP602
RX501
J501
X501
X502
OPTICAL
DIGITAL INPUT
COAXIAL
1-631-635-11
11

3-6. SCHEMATIC DIAGRAM
—DIGITAL SECTION—

• Refer to page 25 for notes.

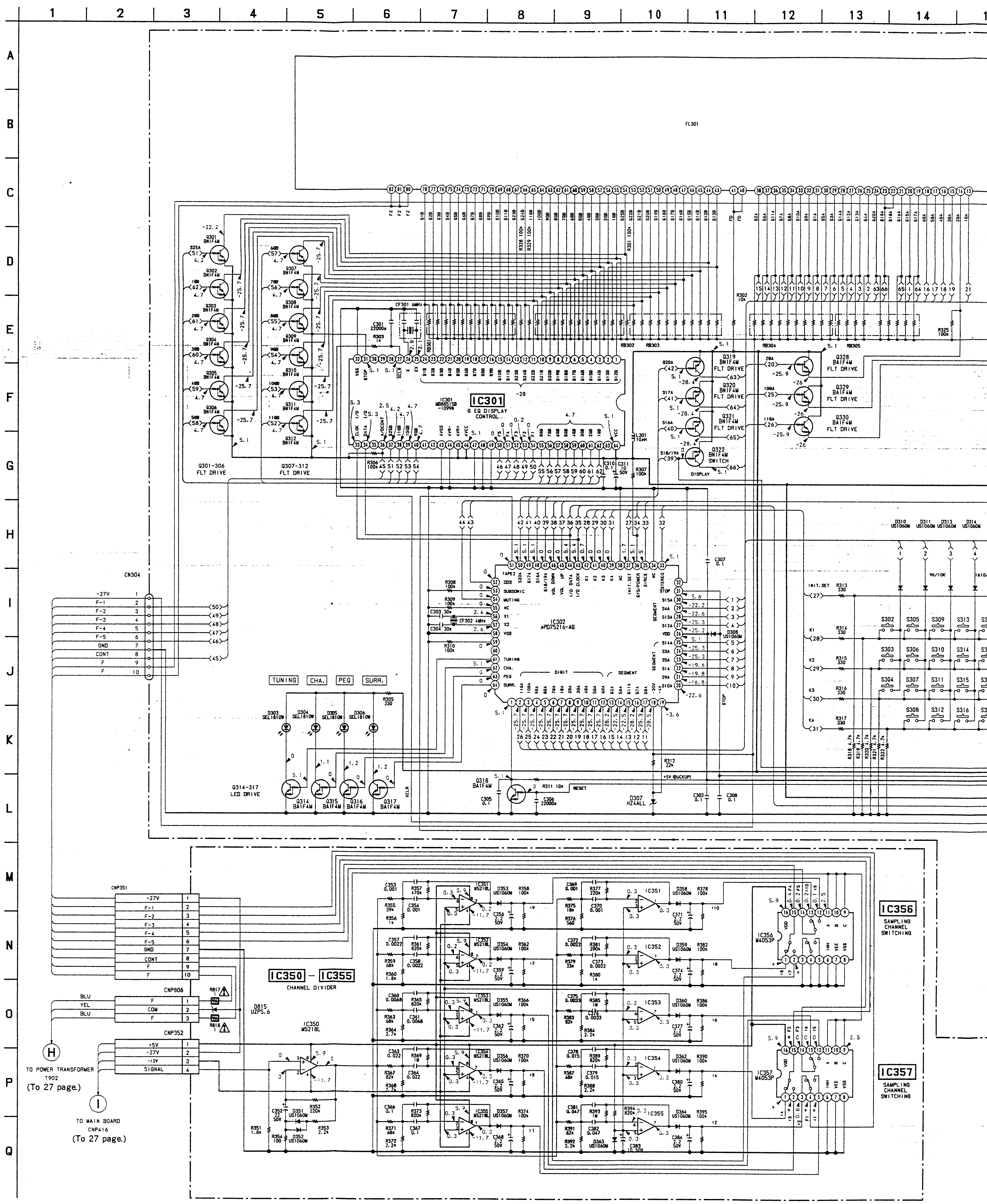


IC501
DIGITAL INPUT SELECT
IC501 SN74HC02N
IC503
BUFFER
IC503 1/2 SN74HCU04
IC504
DIGITAL INPUT SELECT
IC504 YM3623B
IC518
IC518 SN74HC125N
IC519
IC519 SN74HC00N
IC520
IC520 SN74HC02N
IC508
DIGITAL FILTER
IC508 CXD2550P
IC509
DIGITAL FILTER SURROUND
IC509 CXD1355P (SURROUND)
IC510
RAM
IC510 MSM41464
IC506
DIGITAL DYNAMIC SOUND
IC506 CXD1160AP (DDS, DOLBY)
IC503
BUFFER
IC503 SN74HCU04
IC507
PARAMETRIC EQUALIZER
IC507 CXD1160AP (PEQ)
IC512
SURROUND EFECT
IC512 CXD1355Q (FRONT)
IC513
ROM
IC513 MSM41464
IC514
+5V REG
IC514 MSF7805
IC515
+5V REG
IC515 MSF7805
IC516
+5V REG
IC516 MSF7805
IC517
-5V REG
IC517 MSF7905
Q502 BA1F4M INITIAL SWITCH
Q503, 504 EMPHASIS SWITCH
Q503 BA1F4N
Q504 BN1F4M
D501 US1060M
D503 US1060M
OPTICAL
RX501
COAXIAL
J501
DIGITAL INPUT
X502
CNP501
FS2
FS1
XCLR
INIT
D. MUTE/IN
EMP/INPUT
S. DATA
S. CLOCK
TO MAIN BOARD CN406 Ⓙ
(To 26 page.)
CNP502
DIAN
DIGITAL1/2
DPAC1/CE
DPAC2/CE
DF. ATT (REC) /CE
DSP1/CE
DSP2/CE
TO MAIN BOARD CNP405 Ⓚ
(To 26 page.)
CNP504
GND
+12V
-12V
TO MAIN BOARD CN408 Ⓟ
(To 26 page.)
CNP503
VCA-3 +8DB
VCA-2 +4DB
VCA-1 +2DB
TO MAIN BOARD CN402 Ⓞ
(To 26 page.)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J K L M N O


IC519
SN74HC00N
IC520
SN74HC02N
Q609 BA1F4M INVERTER
IC610 AK5326
IC610 A-D CONVERTER
IC609 LINE AMP
IC609 μPC4570C
D611 US1060M
D612 US1060M
D661 US1060M
D662 US1060M
CNP601
ANALOG (L)
GND
ANALOG (R)
M TO MAIN BOARD CNP401
(To 26 page.)
IC508 DIGITAL FILTER
IC508 CXD2550P
IC605 D-A CONVERTER
IC605 μPD6372
IC606 LPF
IC606 μPC4570C
CNP602
DIGITAL (R)
GND
DIGITAL (L)
L TO MAIN BOARD CNP403
(To 26 page.)
IC603 D-A CONVERTER
IC603 μPD6372
IC510 RAM
IC510 MSM41464
Q608 2SC3622A EMPHASIS
Q608, 658 EMPHASIS
Q658 2SC3622A EMPHASIS
IC604 μPC4570C
IC604 LPF
CNP604
-12
+12
SURR. OUT (R)
GND
SURR. (L)
G TO MOTOR VOLUME BOARD CNP422
(To 26 page.)
IC601
+12V D-A CONVERTER
IC601 PCM1701
Q503, 504 EMPHASIS SWITCH
Q503 BA1F4N
Q504 BN1F4M
IC602 I TO V CONVERTER
IC602 μPC4570C
IC652 LPF
IC652 μPC4570C
CNP603
DSPOUT (R)
GND
DSPOUT (L)
N TO MAIN BOARD CNP404
(To 26 page.)
Q604 2SC3622A EMPHASIS
Q605 2SC3622A 2dB GAIN SWITCH
Q606 2SC3622A 4dB GAIN SWITCH
Q607 2SC3622A 8dB GAIN SWITCH
IC513 ROM
IC513 MSM41464
IC651 D-A CONVERTER
IC651 PCM1701
Q654 2SC3622A EMPHASIS
Q655 2SC3622A 2dB GAIN SWITCH
Q656 2SC3622A 4dB GAIN SWITCH
Q657 2SC3622A 8dB GAIN SWITCH
Q601 BN1F4M
Q602 BN1F4M
Q603 BN1F4M
Q601-603 GAIN CONTROL SWITCH
13
14
15
16
17
18
19
20
21
22
23
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O

3-7. SCHEMATIC DIAGRAM
—DISPLAY SECTION—

• Refer to page 25 for notes.


FL301
IC301
MB88515B-1099M
G EQ DISPLAY CONTROL
IC302
μPD75216-AG
CF301 6MHz
CF302 4MHz
Q301-306
FLT DRIVE
Q307-312
FLT DRIVE
Q319 BN1F4M FLT DRIVE
Q320 BN1F4M FLT DRIVE
Q321 BN1F4M FLT DRIVE
Q322 BN1F4M SWITCH
Q328 BA1F4M FLT DRIVE
Q329 BA1F4M FLT DRIVE
Q330 BA1F4M FLT DRIVE
CN304
-27V
F-1
F-2
F-3
F-4
F-5
GND
CONT
F
F
TUNING
CHA.
PEQ
SURR.
D303 SEL1810W
D304 SEL1810W
D305 SEL1810W
D306 SEL1810W
Q314-317
LED DRIVE
Q314 BA1F4M
Q315 BA1F4M
Q316 BA1F4M
Q317 BA1F4M
Q318 BA1F4M
RESET
D307 HZ4ALL
+5V (BUCKUP)
INIT. SET
D310 US1060M
D311 US1060M
D313 US1060M
D314 US1060M
S302
S303
S304
S305
S306
S307
S308
S309
S310
S311
S312
S313
S314
S315
S316
CNP351
CNP806
BLU
YEL
BLU
COM
R817
R818
D815 UZP5.6
CNP352
+5V
-27V
-12V
SIGNAL
H
TO POWER TRANSFORMER T902
(To 27 page.)
I
TO MAIN BOARD CNP416
(To 27 page.)
IC350 - IC355
CHANNEL DIVIDER
IC350 M5218L
IC351 M5218L
IC352 M5218L
IC353 M5218L
IC354 M5218L
IC355 M5218L
IC356
M4053P
SAMPLING CHANNEL SWITCHING
IC357
M4053P
SAMPLING CHANNEL SWITCHING
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14
A
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C
D
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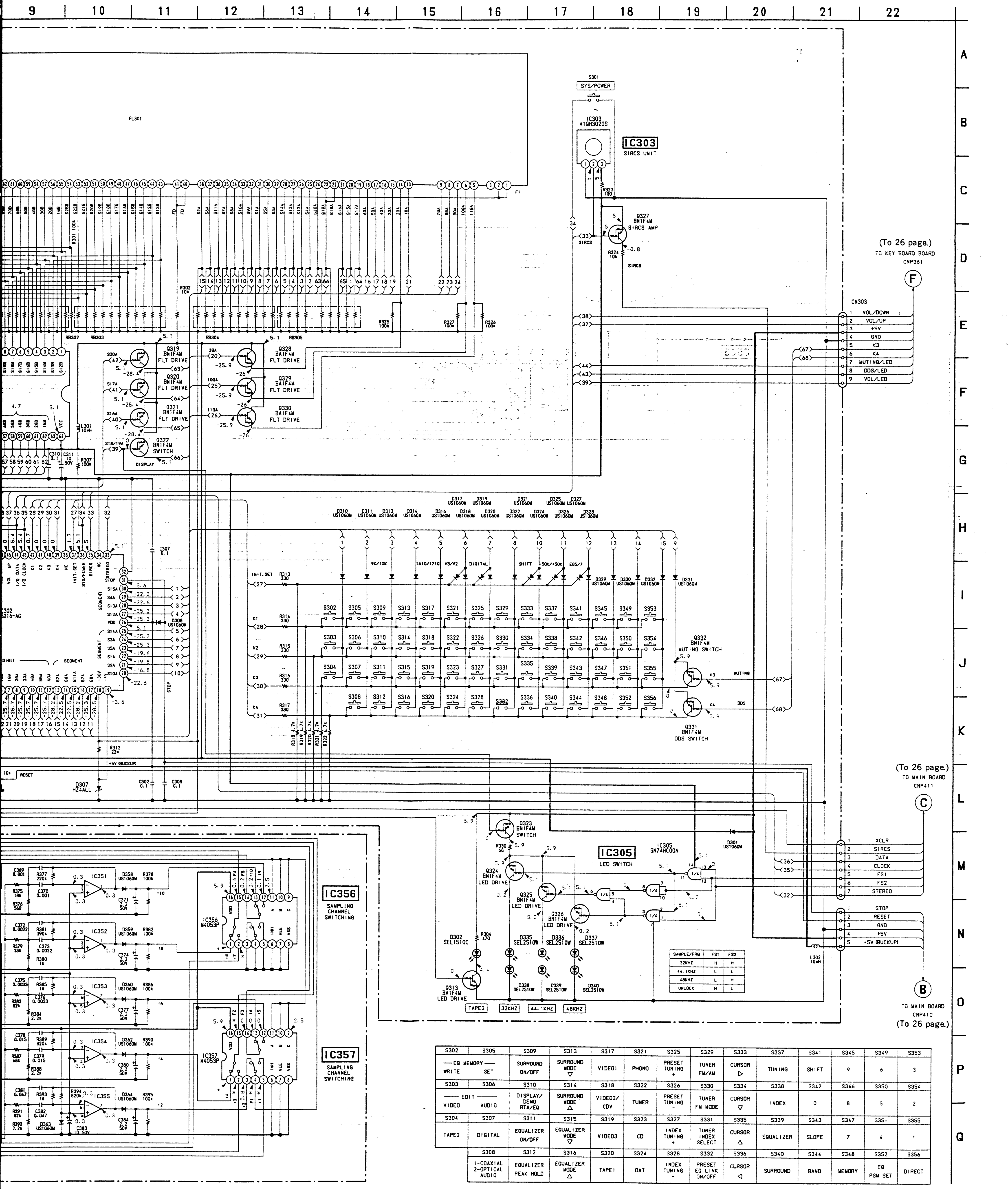
K
L
M
N
O
P
Q


9
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A
B
C
D
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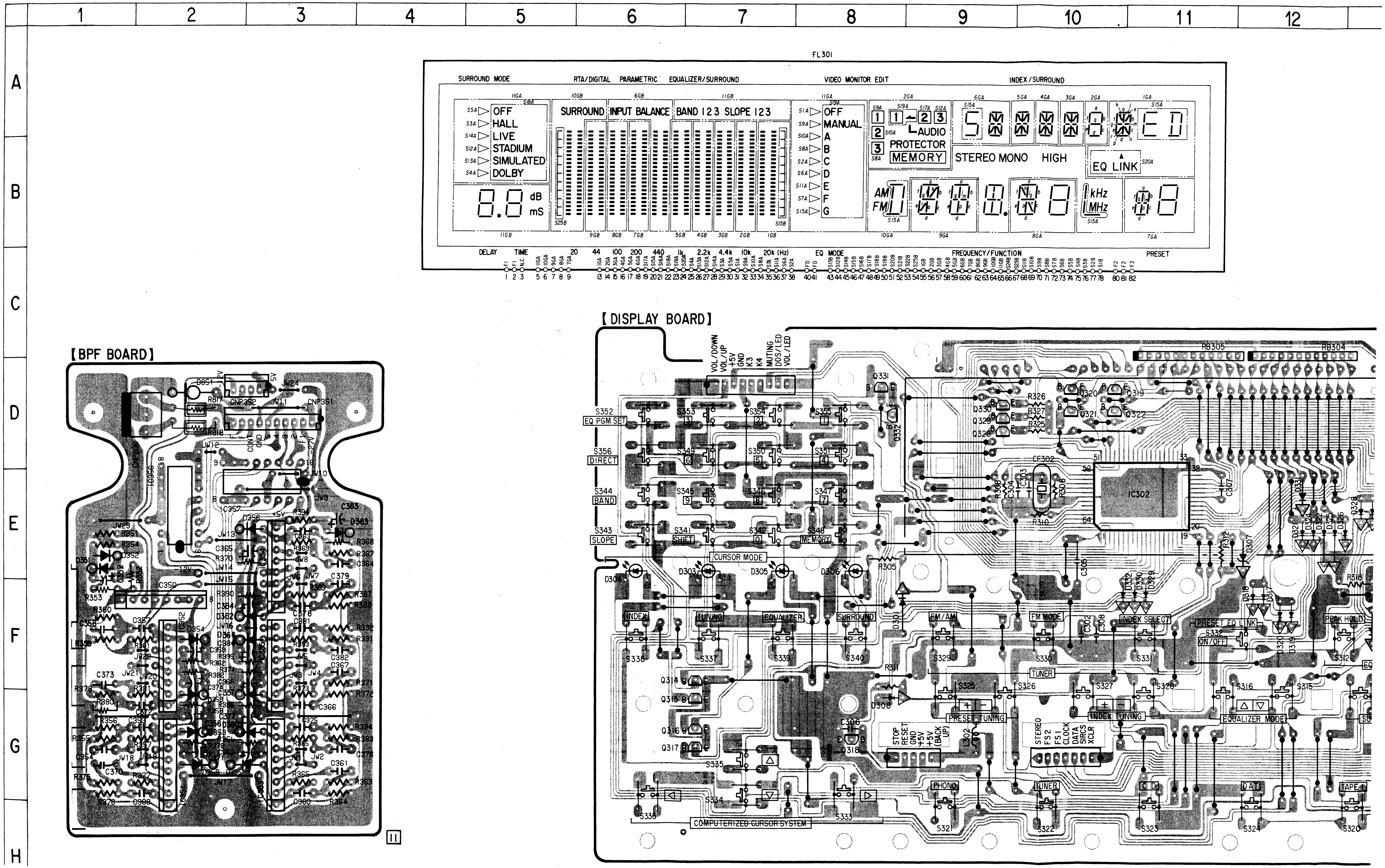
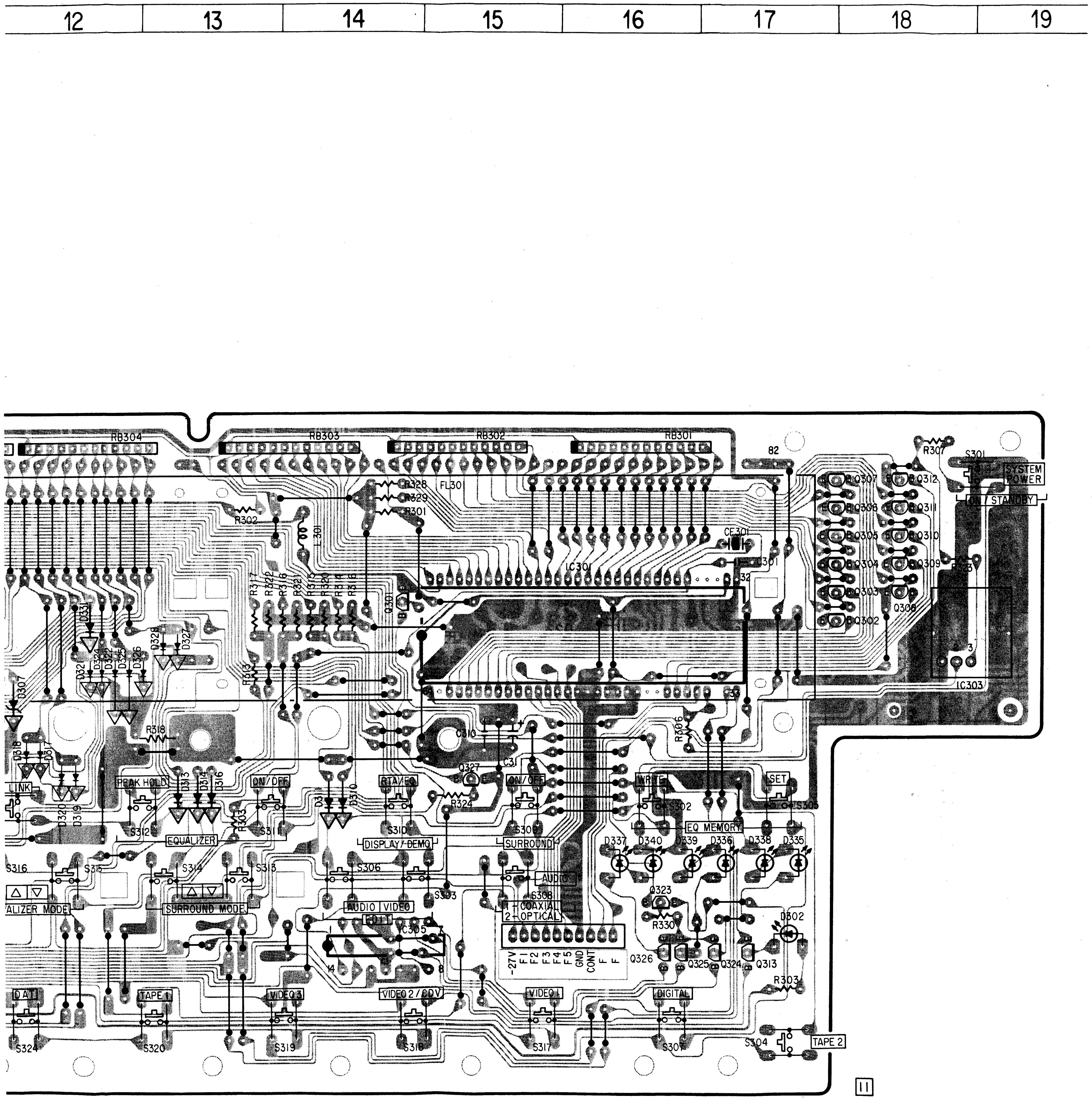
F
G
H
I
J
K
L
M
N
O
P
Q
FL301
S301
SYS/POWER
IC303
A1QH3020S
IC303
SIRCS UNIT
R323
100
Q327
BN1F4M
SIRCS AMP
R324
10k
SIRCS
(To 26 page.)
TO KEY BOARD BOARD
CNP361
F
CN303
1 VOL/DOWN
2 VOL/UP
3 +5V
4 GND
5 K3
6 K4
7 MUTING/LED
8 DDS/LED
9 VOL/LED
RB302
RB303
RB304
RB305
R302
10k
R325
100k
R327
100k
R326
100k
Q319
BN1F4M
FLT DRIVE
Q320
BN1F4M
FLT DRIVE
Q321
BN1F4M
FLT DRIVE
Q322
BN1F4M
SWITCH
DISPLAY
Q328
BA1F4M
FLT DRIVE
Q329
BA1F4M
FLT DRIVE
Q330
BA1F4M
FLT DRIVE
L301
10uH
R307
100k
C310
C311
C307
0.1
INIT.SET
R313
330
K1
R314
330
K2
R315
330
K3
R316
330
K4
R317
330
9K/10K
1610/1710
V3/V2
DIGITAL
SHIFT
-50K/+50K
EQ5/7
D308
US1060M
Q332
BN1F4M
MUTING SWITCH
MUTING
Q331
BN1F4M
DDS SWITCH
DDS
R318 4.7k
R319 4.7k
R320 4.7k
R321 4.7k
R322 4.7k
R312
22k
+5V (BUCKUP)
RESET
D307
HZ4ALL
C302
0.1
C308
0.1
(To 26 page.)
TO MAIN BOARD
CNP411
C
1 XCLR
2 SIRCS
3 DATA
4 CLOCK
5 FS1
6 FS2
7 STEREO
1 STOP
2 RESET
3 GND
4 +5V
5 +5V (BUCKUP)
L302
10uH
D301
US1060M
Q323
BN1F4M
SWITCH
R330
68
Q324
BN1F4M
LED DRIVE
Q325
BN1F4M
LED DRIVE
Q326
BN1F4M
LED DRIVE
IC305
LED SWITCH
IC305
SN74HC00N
D302
SEL1510C
R304
470
D335
SEL2510W
D336
SEL2510W
D337
SEL2510W
D338
SEL2510W
D339
SEL2510W
D340
SEL2510W
Q313
BA1F4M
LED DRIVE
TAPE2
32KHZ
44.1KHZ
48KHZ
SAMPLE/FRQ FS1 FS2
32KHZ H H
44.1KHZ L L
48KHZ L H
UNLOCK H L
B
TO MAIN BOARD
CNP410
(To 26 page.)
IC351
IC352
IC353
IC354
IC355
IC356
M4053P
IC356
SAMPLING CHANNEL SWITCHING
IC357
M4053P
IC357
SAMPLING CHANNEL SWITCHING

S302	S305	S309	S313	S317	S321	S325	S329	S333	S337	S341	S345	S349	S353
— EQ MEMORY — WRITE	SET	SURROUND ON/OFF	SURROUND MODE ▽	VIDEO1	PHONO	PRESET TUNING +	TUNER FM/AM	CURSOR ▷	TUNING	SHIFT	9	6	3
S303	S306	S310	S314	S318	S322	S326	S330	S334	S338	S342	S346	S350	S354
—— EDIT —— VIDEO	AUDIO	DISPLAY/ DEMO RTA/EQ	SURROUND MODE △	VIDEO2/ CDV	TUNER	PRESET TUNING -	TUNER FM MODE	CURSOR ▽	INDEX	0	8	5	2
S304	S307	S311	S315	S319	S323	S327	S331	S335	S339	S343	S347	S351	S355
TAPE2	DIGITAL	EQUALIZER ON/OFF	EQUALIZER MODE ▽	VIDEO3	CD	INDEX TUNING +	TUNER INDEX SELECT	CURSOR △	EQUALIZER	SLOPE	7	4	1
	S308	S312	S316	S320	S324	S328	S332	S336	S340	S344	S348	S352	S356
	1-COAXIAL 2-OPTICAL AUDIO	EQUALIZER PEAK HOLD	EQUALIZER MODE △	TAPE1	DAT	INDEX TUNING -	PRESET EQ LINK ON/OFF	CURSOR ◁	SURROUND	BAND	MEMORY	EQ PGM SET	DIRECT

3-8. PRINTED WIRING BOARD —DISPLAY SECTION—

● Refer to page 20 for Semiconductor Lead Layouts


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
FL301
SURROUND MODE
RTA/DIGITAL PARAMETRIC EQUALIZER/SURROUND
VIDEO MONITOR EDIT
INDEX/SURROUND
OFF
HALL
LIVE
STADIUM
SIMULATED
DOLBY
SURROUND
INPUT BALANCE
BAND 1 2 3 SLOPE 1 2 3
OFF
MANUAL
A
B
C
D
E
F
G
AUDIO
PROTECTOR
MEMORY
STEREO MONO HIGH
EQ LINK
dB
mS
AM
FM
kHz
MHz
DELAY TIME
20 44 100 200 440 1k 2.2k 4.4k 10k 20k (Hz)
EQ MODE
FREQUENCY/FUNCTION
PRESET
【BPF BOARD】
CNP352
CNP351
IC350
IC357
IC350
IC352
D356
D351
D352
D353
D354
C383
D363
11
【DISPLAY BOARD】
VOL/DOWN
VOL/UP
+5V
GND
K3
K4
MUTING
DOS/LED
VOL/LED
RB305
RB304
IC302
CF302
Q331
Q332
Q320
Q319
Q321
Q322
Q330
Q329
Q328
R326
R327
R325
R310
R305
R312
R318
S352
EQ PGM SET
S356
DIRECT
S344
BAND
S343
SLOPE
S353
S354
S355
S349
S350
S351
S345
S346
S347
S341
SHIFT
S342
S348
MEMORY
CURSOR MODE
D304
D303
D305
D306
D301
D307
D308
INDEX
TUNING
EQUALIZER
SURROUND
FM/AM
FM MODE
INDEX SELECT
PRESET EQ LINK
S332
ON/OFF
PEAK HOLD
S338
S337
S339
S340
S329
S330
S331
S312
TUNER
S325
S326
S327
S328
S316
S315
PRESET TUNING
INDEX TUNING
EQUALIZER MODE
Q314
Q315
Q316
Q317
Q318
C306
STOP
RESET
GND
+5V
(BACK UP)
STEREO
FS 2
FS 1
CLOCK
DATA
SIRCS
XCLR
S335
S334
S336
S333
COMPUTERIZED CURSOR SYSTEM
PHONO
TUNER
CD
DAT
TAPE
S321
S322
S323
S324
S320


12
13
14
15
16
17
18
19
RB304
RB303
RB302
RB301
R328
R329
R301
R302
FL301
L301
CE301
IC301
R307
S301
SYSTEM POWER
ON / STANDBY
Q307
Q312
Q306
Q311
Q305
Q310
Q304
Q309
Q303
Q308
Q302
IC303
R317
R322
R321
R315
R320
R314
R319
R313
D331
D324
D322
D325
D326
D328
D327
D307
D318
D321
D320
D319
R318
LINK
PEAK HOLD
D313
D314
D316
ON/OFF
D310
RTA/EQ
C310
Q327
R324
ON/OFF
R306
WRITE
SET
S302
S305
S312
EQUALIZER
S311
S310
DISPLAY/DEMO
S309
SURROUND
EQ MEMORY
D337
D340
D339
D336
D338
D335
S316
S315
S314
S313
S306
AUDIO
S303
S308
ALIZER MODE
SURROUND MODE
AUDIO VIDEO
EDIT
1-COAXIAL
2-OPTICAL
IC305
Q323
R330
D302
-27V
F1
F2
F3
F4
F5
GND
CONT
F
F
Q326
Q325
Q324
Q313
R303
DAT
TAPE 1
VIDEO 3
VIDEO 2/CDV
VIDEO 1
DIGITAL
S324
S320
S319
S318
S317
S307
S304
TAPE 2
11

• Semiconductor Location

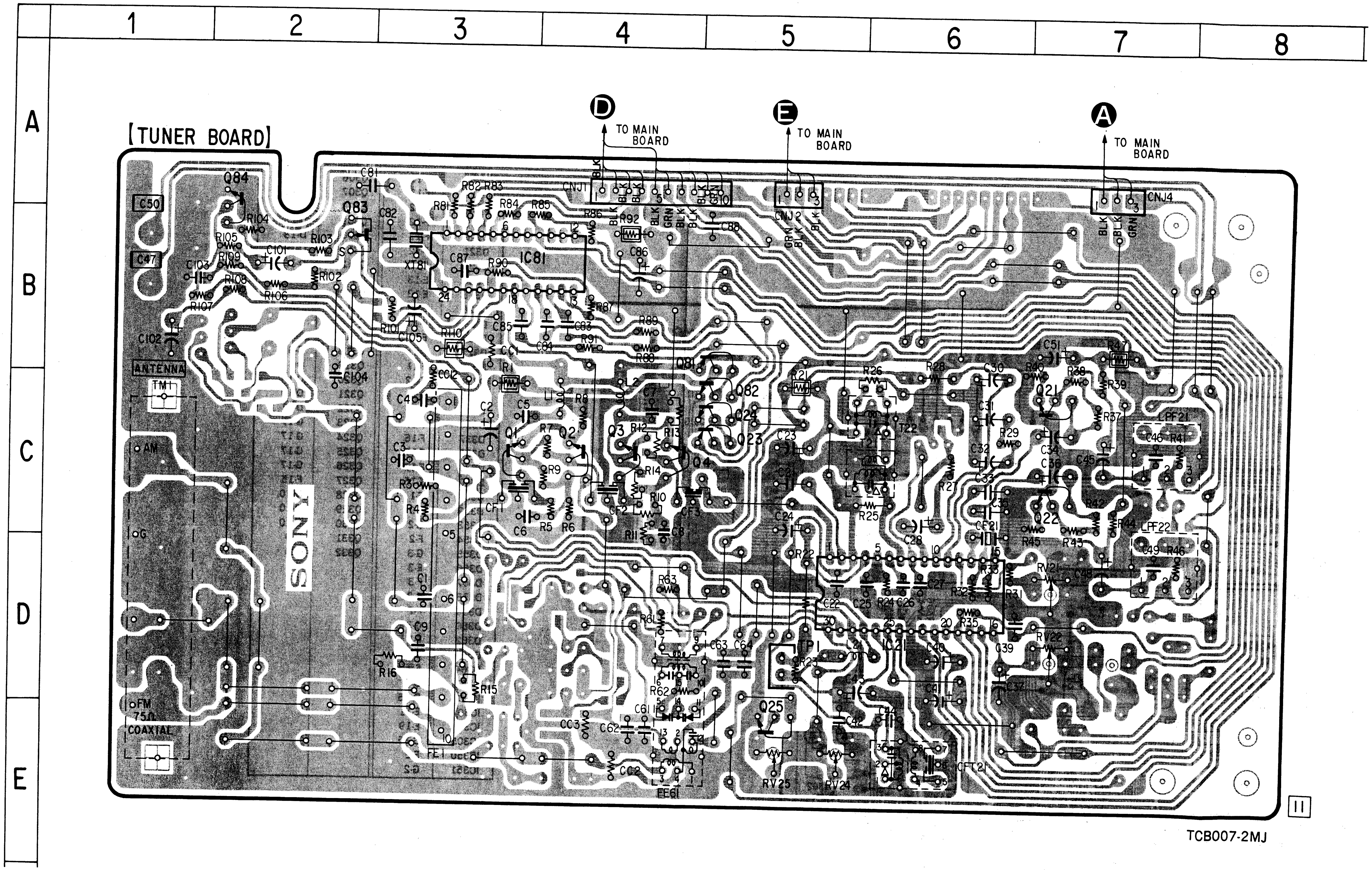
Ref. No.	Location	Ref. No.	Location
D301	F-9	IC352	F-2
D302	G-17	IC353	G-3
D303	E-7	IC354	E-3
D304	E-7	IC355	F-3
D305	E-8	IC356	E-2
D306	E-8	IC357	D-3
D307	E-12		
D308	F-9	Q301	E-15
D310	F-14	Q302	E-18
D311	F-14	Q303	D-18
D313	F-13	Q304	D-18
D314	F-13	Q305	D-18
D316	F-13	Q306	D-18
D317	F-12	Q307	D-18
D318	F-12	Q308	D-18
D319	F-12	Q309	D-18
D320	F-12	Q310	D-18
D321	F-12	Q311	D-18
D322	E-13	Q312	D-18
D324	E-13	Q313	G-17
D325	E-13	Q314	F-7
D326	E-13	Q315	F-7
D327	E-13	Q316	G-7
D328	E-13	Q317	G-7
D329	F-11	Q318	G-8
D330	F-11	Q319	D-11
D331	E-12	Q320	D-10
D332	F-11	Q321	D-10
D335	F-17	Q322	D-11
D336	F-17	Q323	G-17
D337	F-16	Q324	G-17
D338	F-17	Q325	G-17
D339	F-17	Q326	G-17
D340	F-16	Q327	F-15
D351	E-1	Q328	D-10
D352	E-2	Q329	D-10
D353	G-2	Q330	D-10
D354	F-2	Q331	D-9
D355	G-3	Q332	D-9
D356	E-3		
D357	F-3		
D358	G-2		
D359	F-2		
D360	G-3		
D362	F-3		
D363	E-4		
D364	F-3		
D851	D-2		
IC301	D-16		
IC302	E-11		
IC303	E-19		
IC305	G-15		
IC350	F-2		
IC351	G-2		

Note:

- ■ : parts mounted on the conductor side.

3-9. PRINTED WIRING BOARD
—TUNER SECTION—

- Refer to page 20 for Semmiconductor Lead Layouts


1
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A
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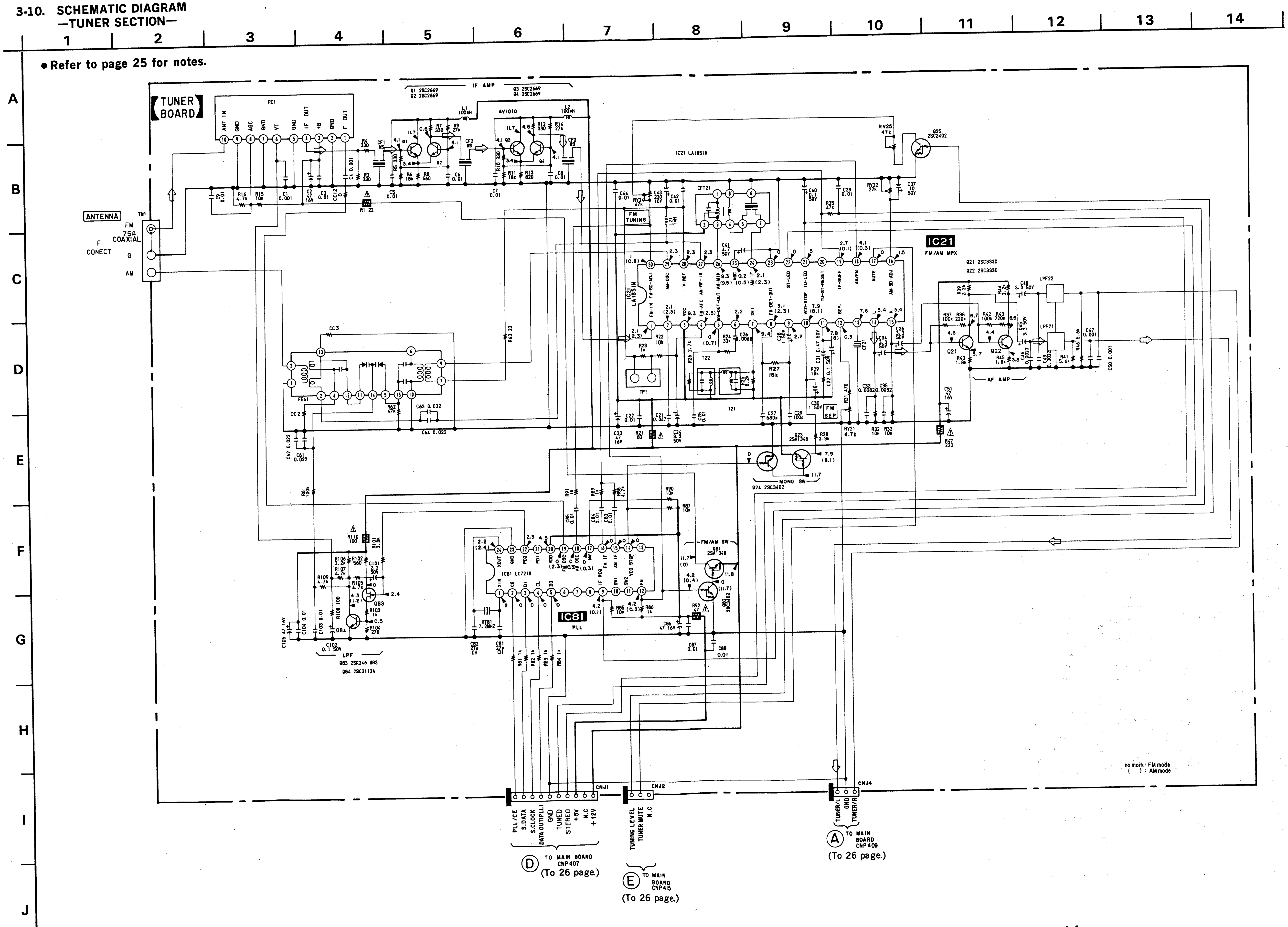
C
D
E
[TUNER BOARD]
D
TO MAIN BOARD
E
TO MAIN BOARD
A
TO MAIN BOARD
CNJ1
CNJ2
CNJ4
BLK
GRN
C50
C47
Q84
Q83
IC81
XT81
ANTENNA
TM1
AM
G
FM 75Ω COAXIAL
SONY
Q1
Q2
Q3
Q4
Q81
Q82
Q21
Q22
Q23
Q24
Q25
LPF21
LPF22
CFT21
RV21
RV22
RV24
RV25
FE1
FE61
CF1
CF2
CF3
IC21
TP1
R15
R16
TCB007-2MJ
II

Note:
- ■ : parts mounted on the conductor side.

3-10. SCHE
—TUI
1
- Refer t

3-10. SCHEMATIC DIAGRAM
—TUNER SECTION—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7
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10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
TUNER BOARD
FE1
ANT IN
GND
AGC
GND
VT
GND
+B
IF OUT
GND
F OUT
IF AMP
Q1 2SC2669
Q2 2SC2669
Q3 2SC2669
Q4 2SC2669
AV1010
L1 100μH
L2 100μH
CF1
CF2
CF3
ANTENNA
TM1
FM 75Ω COAXIAL
F CONECT
G
AM
IC21 LA1851N
CFT21
FM TUNING
RV24 47k
RV25 47k
Q25 2SC3402
RV22 22k
IC21
FM/AM MPX
Q21 2SC3330
Q22 2SC3330
LPF22
LPF21
AF AMP
FM-IN
AM-OSC
Y-REF
AM-MF-IN
FM-AFC
AM-MIX
AM-DET-OUT
AM-IF
DET
FM-DET-OUT
ST-LED
TU-LED
VCO-STOP
TU-ST-RESET
IF-BUFF
BEF.
AM/FM
MUTE
AM-SD-ADJ
FM-SD-ADJ
VCC
TP1
T22
T21
FM SEP
Q23 2SA1348
Q24 2SC3402
MONO SW
CC3
FE61
CC2
R62 47k
C63 0.022
C64 0.022
C62 0.022
C61 0.022
R61 100k
R110 100
R101 3.3k
Q83
Q84
LPF
Q83 2SK246 GR3
Q84 2SC3112A
IC81 LC7218
IC81
PLL
XOUT
XIN
CE
DI
CL
DO
IF REQ
AM IF
FM IF
SW1
SW2
VCO STOP
FM
XT81 7.2MHz
FM/AM SW
Q81 2SA1348
Q82 2SC3402
CNJ1
CNJ2
CNJ4
PLL/CE
S.DATA
S.CLOCK
DATA OUT(PLL)
GND
TUNED
STEREO
+5V
N.C
+12V
TUNING LEVEL
TUNER MUTE
N.C
TUNER/L
GND
TUNER/R
D
TO MAIN BOARD CNP407
(To 26 page.)
E
TO MAIN BOARD CNP415
(To 26 page.)
A
TO MAIN BOARD CNP409
(To 26 page.)
no mark : FM mode
( ) : AM mode

• Refer to page 25 for notes.

3-11. EXPLANATION OF IC411 (μPD78C14)

Pin No.	Symbol	ACT	I/O	Pin No.	Symbol	ACT	I/O
1	CLK	L	I/O	27	MODE1	—	I/O
2	DATA	L	I/O	28	$\overline{\text{RESET}}$	—	I
3	EMPH (IN)	H	I	29	MODE0	—	I/O
4	D-MUTE (IN)	H	I	30	X2	—	—
5	D-MUTE (OUT)	H	O	31	X1	—	I
6	X CLR (OUT)	L	O	32	V_{SS}	—	—
7	FS1	H	I	33−46	——	—	—
8	FS2	H	I	47	VIDEO-B	H	O
9	VCA1 (+2dB)	H	O	48	VIDEO-A	H	O
10	VCA2 (+4dB)	H	O	49	DUB	H	O
11	VCA3 (+8dB)	H	O	50	VIDEO-INHIBIT	H	O
12	S-CLOCK	H	O	51	SP-RY	H	O
13	S-DATA	H	O	52	POWER-RY	H	O
14	PLL (LC7822)	H	O	53	DISPLAY/ON	L	O
15	TUNER-MUTE	H	O	54	LAT (LC7822)	H	I/O
16	TUNE-LEVEL	H	O	55	——	—	—
17	DATA IN	H	I	56	DIAN	H	O
18	AUTO-STOP	L	I	57	DIGITAL1	L	O
19	D-MUTE	L	O	58	DPAC1 (COM)	L	O
20	PROTECT	L	I	59	DPAC2 (FRONT)	L	O
21	−20dB	H	O	60	DF/ATT (REC)	L	O
22	TAPE-2	H	O	61	DPS1 (FRONT)	L	O
23	SURR-TEST	H	O	62	DPS2 (REAR)	L	O
24	F-MUTE	L	O	63	$\overline{\text{STOP}}$	L	I
25	STOP	L	I	64	V_{SS}	—	—
26	INT1	—	I				

IC506, IC507 Digital • Audio Signal Processing LSIs CXD1160P

These are digital • audio signal processing LSIs which incorporate instruction RAM, coefficient RAM, data RAM, multiplier and level shifter and are equipped with serial I/O, delay I/O (max. capability: stereo 1024 sampling • delay) and microcomputer interface for peripheral devices.

Pin No.	Symbol	I/O	Description
1	SDT	I	Serial • data input terminal to receive instructions, coefficients, I/O controls transferred from the microcomputer.
2	SCK	I	SDT serial • clock input terminal to fetches in data at a rise.
3	XSLD	I	Input terminal for a latch signal from the system microcomputer to latch serial • data inside the IC. LOW active (LCK for DPAC1).
4	SIO2	I	Input terminal to set the number of serial bit clocks BCK in each channels (ch1 or ch2) data transfer in one sampling section. 32-bit clock mode when fixed at GND, and 24-bit clock mode when fixed at +5V. (32 bits for this set)
5	DYSL	I	Delay I/O mode selector input terminal. Serial mode when fixed at GND, and similar operation to serial I/O. Delay mode when fixed at +5V, and a delay line equivalent to 2-channels is configured by connecting to external DRAM (64kbits).
6	TST	I	Test pin. Normally, fix at GND.
7	VSS		GND terminal.
8	MCK1	I	Master clock input 1. The master clock ACK inside the IC is half this frequency. Fix MCK2 at +5V when inputting the master clock from MCK2.
9	MCK2	I	Master clock input 2. The master clock ACK inside the IC is the same frequency as this. Fix MCK1 at +5V or GND when inputting the master clock from MCK 2.
10	SI	I	1-sampling 2-channel serial data input terminal.
11	SO	O	1-sampling 2-channel serial data output terminal.
12	BCK	I	Serial bit clock input terminal for SI and SO. Serial input data is fetched in at a rise of this BCK and output data is sent out. (64FS)
13	LRCK	I	FS clock input terminal for I/O (1FS)
14	XOVF	O	Adder/subtracter overflow detection output. "L" at overflow time.
15	A6	O	External DRAM address output A6
16	A3	O	External DRAM address output A3
17	A4	O	External DRAM address output A4
18	A5	O	External DRAM address output A5
19	A7	O	External DRAM address output A7
20	XCLR	I	Test pin. Normally, fix at +5V.
21	VDD	—	+5V power supply terminal.
22	A1	O	External DRAM address output A1
23	A2	O	External DRAM address output A2
24	A0	O	External DRAM address output A0
25	XRAS	O	Low address • strobe output terminal for external DRAM.
26	XWSO	O	Serves as a serial data output terminal when DYSL is at "L", and works in accordance with each serial I/O mode. Serves as an external DRAM write enable output terminal when DYSL is at "H".
27	DIO	I/O	Serves as a serial data input terminal when DYSL is at "L", and fetches in data ds accordance with each serial I/O mode. When DYSL is at "H", it serves as an external DRAM data input/output terminal to be used as a common line for data input D_{IN} and data output D_{OUT}.
28	XCAS	O	Column address strobe output terminal for external DRAM.

SECTION 4
EXPLODED VIEWS

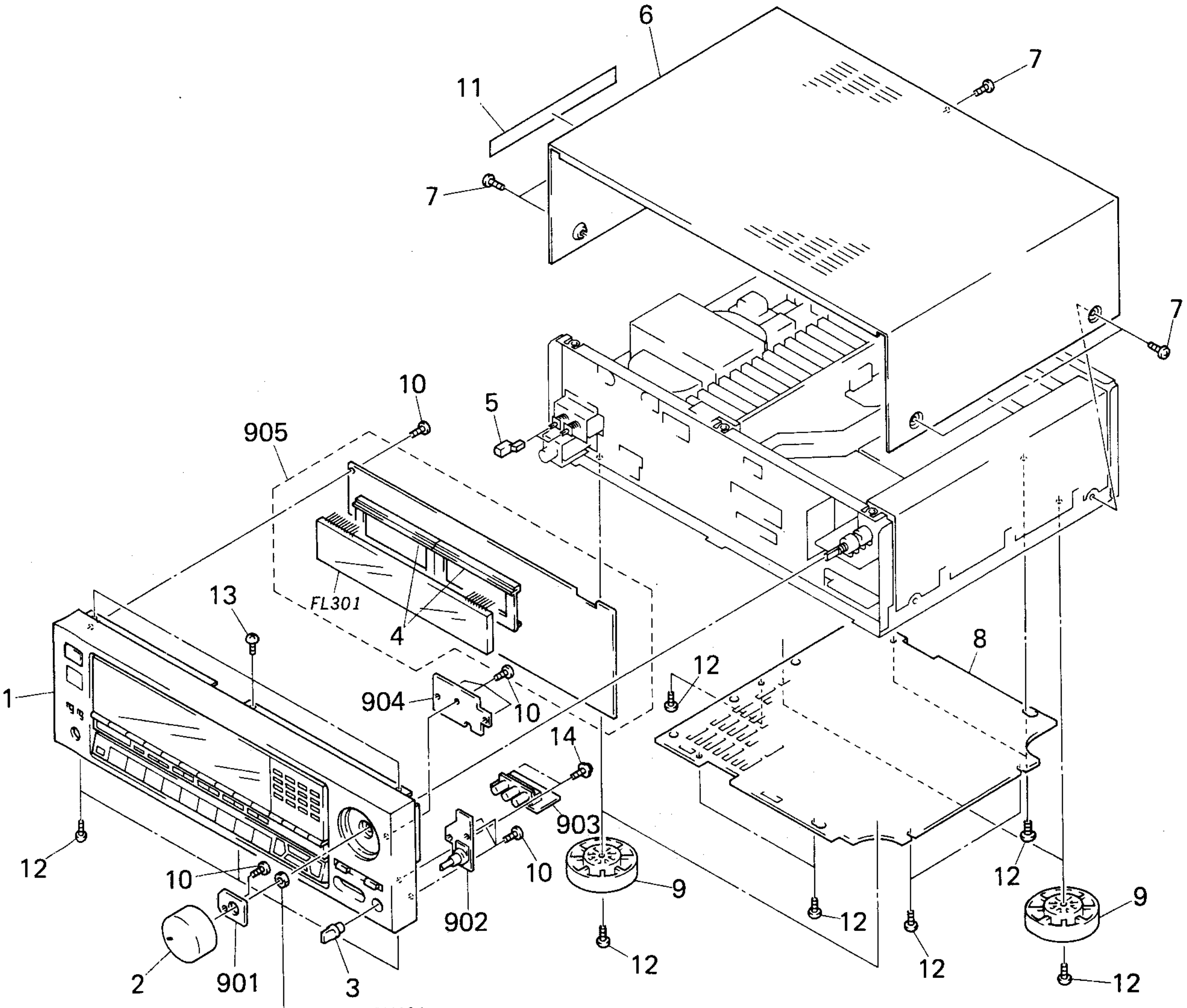
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ Cabinet's Color ↑ Parts' Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

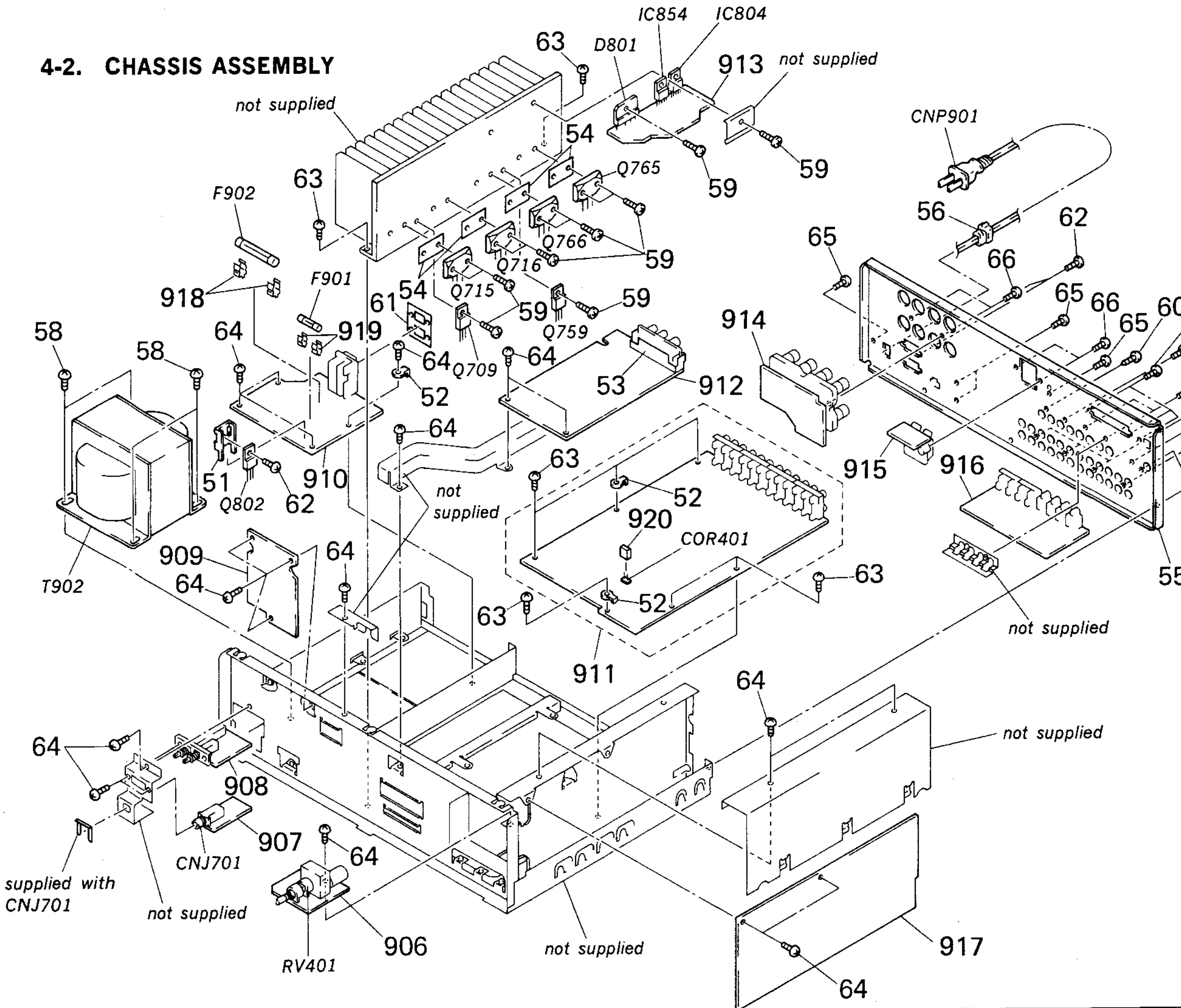
4-1. FRONT PANEL ASSEMBLY



supplied with RV401

No.	Part No.	Description	Remarks
1	A-4323-077-A	PANEL ASSY, FRONT	
2	X-4906-828-1	KNOB (47) ASSY	
3	4-925-014-01	KNOB (DIA.10)	
4	*4-931-025-01	HOLDER (FL)	
5	4-906-872-01	KNOB, SQUARE	
6	4-931-031-11	CASE	
7	3-704-366-01	SCREW (CASE) (M3X8)	
8	*4-927-806-11	PLATE, BOTTOM	
9	X-4885-950-1	FOOT ASSY	
10	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
11	4-915-702-01	LABEL, CAUTION, DOLBY SURROUND	
12	7-682-548-04	SCREW +BVTT 3X8 (S)	
13	7-682-547-04	SCREW +BVTT 3X6 (S)	
14	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
901	*1-631-642-11	PC BOARD, VOL LED	
902	*1-631-900-11	PC BOARD, BALANCE VOL	
903	*1-631-649-11	PC BOARD, VIDEO (3)	
904	*1-631-638-11	PC BOARD, KEY BOARD	
905	*A-4333-167-A	MOUNTED PCB, DISPLAY	4,FL301
FL301	1-519-522-11	INDICATOR TUBE, FLUORESCENT	

4-2. CHASSIS ASSEMBLY


IC854
IC804
63
D801
913
not supplied
not supplied
CNP901
54
Q765
59
59
63
F902
56
62
Q766
Q716
59
65
66
918
F901
Q715
61
54
59
Q759
59
65
66
60
66
58
58
64
919
64
Q709
64
914
65
64
66
52
53
912
57
64
63
915
916
60
51
910
not supplied
Q802
62
52
920
COR401
65
909
64
64
T902
63
52
63
55
not supplied
911
64
64
not supplied
908
907
64
CNJ701
supplied with CNJ701
not supplied
906
RV401
not supplied
917
64

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

No.	Part No.	Description	Remarks
51	*3-309-144-21	HEAT SINK	
52	*3-346-266-12	PLATE, GROUND	
53	*4-924-988-11	PLATE (ST), GROUND	
54	4-885-901-31	SHEET, RADIATION	
55	*4-931-029-01	(US).........PANEL, BACK	
	*4-931-029-11	(Canadian)...PANEL, BACK	
56	*3-703-244-00	BUSHING (2104), CORD	
57	3-706-165-00	SCREW	
58	7-682-561-04	SCREW +BVTT 4X8 (S)	
59	7-682-549-04	SCREW +B 3X10	
60	7-621-849-00	SCREW, TAPPING	
61	*4-931-038-01	SPACER (2 GANG)	
62	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
63	7-682-548-04	SCREW +BVTT 3X8 (S)	
64	7-682-547-04	SCREW +BVTT 3X6 (S)	
65	7-682-547-09	SCREW +BVTT 3X6 (S)	
66	7-685-647-19	SCREW +BVTP 3X10 TYPE2 N-S	
906	*1-631-637-11	PC BOARD, MOTOR VOLUME	
907	*1-631-647-11	PC BOARD, HEADPHONE	
908	*1-631-646-11	PC BOARD, SPEAKER SWITCH	
909	*1-631-641-11	PC BOARD, BPF	
910	*1-631-640-11	PC BOARD, POWER	
911	*A-4333-163-A	MOUNTED PCB, MAIN	52,920
912	*A-4303-169-A	MOUNTED PCB, TUNER (TCB007-2MJ)	
913	*1-631-644-11	PC BOARD, SURROUND AMPLIFIER	
914	*1-631-648-11	PC BOARD, SPEAKER TERMINAL	
915	*1-631-645-11	PC BOARD, SPEAKER TERMINAL (SURROUND)	
916	*A-4333-171-A	MOUNTED PCB, VIDEO	
917	*A-4333-174-A	MOUNTED PCB, DIGITAL	
918	*1-533-185-11	HOLDER, FUSE	
919	*1-533-213-31	HOLDER, FUSE	
920	*1-565-514-11	SOCKET, CONNECTOR 2P	
CNJ701	1-507-796-71	JACK (HEAD)	
⚠CNP901.	1-557-577-11	CORD, POWER	
D801	8-719-302-38	DIODE RBV-602-01	
F901 ⚠.	1-532-598-00	FUSE, GLASS TUBE (125V/4A)	
F902 ⚠.	1-532-509-00	FUSE, GLASS TUBE (125V/6.3A)	
IC804	8-749-920-76	IC SI-18752	
IC854	8-749-920-76	IC SI-18752	
Q709	8-729-303-58	TRANSISTOR 2SC3851-0	
Q715	8-729-320-03	TRANSISTOR 2SC2921M-0	
Q716	8-729-300-22	TRANSISTOR 2SA1215	
Q759	8-729-303-58	TRANSISTOR 2SC3851-0	
Q765	8-729-320-03	TRANSISTOR 2SC2921M-0	
Q766	8-729-300-22	TRANSISTOR 2SA1215	
RV401	1-238-655-11	RES, VAR, CARBON 100KX4 (VOLUME)	
T901 ⚠.	1-449-611-11	TRANSFORMER, POWER	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

TUNER BOARD

Ref.No.	Part No.	Description			
C1	1-162-294-31	CERAMIC CHIP	0.001MF	20%	25V
C2	1-124-477-11	ELECT	47MF	20%	16V
C3	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C4	1-162-294-31	CERAMIC CHIP	0.001MF	20%	25V
C5	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C6	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C7	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C8	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C9	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C21	1-101-006-00	CERAMIC	0.047MF	10%	50V
C22	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C23	1-124-477-11	ELECT	47MF	20%	16V
C24	1-123-382-00	ELECT	3.3MF	20%	50V
C25	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C26	1-163-019-00	CERAMIC CHIP	0.0068MF	20%	12V
C27	1-163-007-11	CERAMIC CHIP	680PF	20%	50V
C28	1-124-499-11	ELECT	1.0MF	20%	50V
C29	1-162-516-11	CERAMIC CHIP	100PF	10%	50V
C30	1-124-499-11	ELECT	1.0MF	20%	50V
C31	1-124-902-00	ELECT	0.47MF	20%	50V
C32	1-124-463-00	ELECT	0.1MF	20%	50V
C33	1-130-482-00	PE TEREPHTHALATE	0.0082MF	5%	50V
C34	1-123-382-00	ELECT	3.3MF	20%	50V
C35	1-130-482-00	PE TEREPHTHALATE	0.0082MF	5%	50V
C36	1-123-382-00	ELECT	3.3MF	20%	50V
C37	1-123-875-11	ELECT	10MF	20%	50V
C39	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C40	1-124-463-00	ELECT	0.1MF	20%	50V
C41	1-124-927-11	ELECT	4.7MF	20%	50V
C42	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C43	1-126-176-11	ELECT	220MF	20%	10V
C44	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C45	1-123-382-00	ELECT	3.3MF	20%	50V
C46	1-161-375-00	CERAMIC CHIP	0.0022MF	20%	25V
C47	1-162-294-31	CERAMIC CHIP	0.001MF	20%	25V
C48	1-123-382-00	ELECT	3.3MF	20%	50V
C49	1-161-375-00	CERAMIC CHIP	0.0022MF	20%	25V
C50	1-162-294-31	CERAMIC CHIP	0.001MF	20%	25V
C51	1-124-477-11	ELECT	47MF	20%	16V
C61	1-163-063-00	CERAMIC MELF	0.022MF		25V
C62	1-163-063-00	CERAMIC MELF	0.022MF		25V
C63	1-163-063-00	CERAMIC MELF	0.022MF		25V
C64	1-163-063-00	CERAMIC MELF	0.022MF		25V
C81	1-102-961-00	CERAMIC	27PF	5%	50V
C82	1-102-961-00	CERAMIC	27PF	5%	50V

Ref.No.	Part No.	Description			
C83	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C84	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C85	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C86	1-124-477-11	ELECT	47MF	20%	16V
C87	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C88	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C101	1-124-925-11	ELECT	2.2MF	20%	50V
C102	1-124-463-00	ELECT	0.1MF	20%	50V
C103	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C104	1-163-059-00	CERAMIC MELF	0.01MF	20%	16V
C105	1-124-477-11	ELECT	47MF	20%	16V
CC2	1-249-366-11	CARBON MELF	0	5%	1/5W
CC3	1-249-366-11	CARBON MELF	0	5%	1/5W
CC12	1-249-366-11	CARBON MELF	0	5%	1/5W
CF1	1-567-389-11	FILTER, CERAMIC			
CF2	1-567-389-11	FILTER, CERAMIC			
CF3	1-567-389-11	FILTER, CERAMIC			
CF21	1-577-075-11	OSCILLATOR, CERAMIC			
CFT21	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)			
CNJ1	*1-568-276-11	SOCKET, CONNECTOR 10P			
CNJ2	1-568-269-11	SOCKET, CONNECTOR 3P			
CNJ4	1-568-307-11	SOCKET, CONNECTOR 3P			
FE1	1-463-857-11	FRONT END (FM)			
FE61	1-236-461-11	ENCAPSULATED COMPONENT			
IC21	8-759-821-45	IC LA1851N			
IC81	8-759-820-91	IC LC7218			
L1	1-410-645-31	MICRO INDUCTOR	100UH	10%	
L2	1-410-645-31	MICRO INDUCTOR	100UH	10%	
L21	1-410-171-11	MICRO INDUCTOR	1MMH	10%	
LPF21	1-235-164-00	FILTER, LOW PASS			
LPF22	1-235-164-00	FILTER, LOW PASS			
Q1	8-729-266-93	TRANSISTOR 2SC2669			
Q2	8-729-266-93	TRANSISTOR 2SC2669			
Q3	8-729-266-93	TRANSISTOR 2SC2669			
Q4	8-729-266-93	TRANSISTOR 2SC2669			
Q21	8-729-119-78	TRANSISTOR 2SC2785			
Q22	8-729-119-78	TRANSISTOR 2SC2785			
Q23	8-729-900-61	TRANSISTOR DTA114ES			
Q24	8-729-900-80	TRANSISTOR DTC114ES			
Q25	8-729-900-80	TRANSISTOR DTC114ES			
Q81	8-729-900-61	TRANSISTOR DTA114ES			
Q82	8-729-900-80	TRANSISTOR DTC114ES			
Q83	8-729-207-53	TRANSISTOR 2SK246GR			
Q84	8-729-203-53	TRANSISTOR 2SC3113AB			

Ref.No.	Part No.	Description				
R1	⚠.1-249-397-11	CARBON(SMALL)	22	5%	1/4W	F
R3	1-249-329-11	CARBON MELF	330	5%	1/8W	
R4	1-249-329-11	CARBON MELF	330	5%	1/8W	
R5	1-249-329-11	CARBON MELF	330	5%	1/8W	
R6	1-249-350-11	CARBON MELF	18K	5%	1/8W	
R7	1-249-329-11	CARBON MELF	330	5%	1/8W	
R8	1-249-332-11	CARBON MELF	560	5%	1/8W	
R9	1-249-332-11	CARBON MELF	560	5%	1/8W	
R10	1-249-329-11	CARBON MELF	330	5%	1/8W	
R11	1-249-350-11	CARBON MELF	18K	5%	1/8W	
R12	1-249-329-11	CARBON MELF	330	5%	1/8W	
R13	1-249-334-11	CARBON MELF	820	5%	1/8W	
R14	1-249-352-11	CARBON MELF	27K	5%	1/8W	
R15	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R16	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R21	⚠.1-249-404-00	CARBON(SMALL)	82	5%	1/4W	F
R22	1-249-429-11	CARBON(SMALL)	10K	5%	1/4W	
R23	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R24	1-249-353-11	CARBON MELF	33K	5%	1/8W	
R26	1-249-346-11	CARBON MELF	8.2K	5%	1/8W	
R27	1-249-340-11	CARBON MELF	2.7K	5%	1/8W	
R28	1-249-423-11	CARBON(SMALL)	3.3K	5%	1/4W	
R29	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R31	1-249-331-11	CARBON MELF	470	5%	1/8W	
R32	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R33	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R35	1-249-355-11	CARBON MELF	47K	5%	1/8W	
R37	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R38	1-249-363-11	CARBON MELF	220K	5%	1/8W	
R39	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R40	1-249-338-11	CARBON MELF	1.8K	5%	1/8W	
R41	1-249-344-11	CARBON MELF	5.6K	5%	1/8W	
R42	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R43	1-249-363-11	CARBON MELF	220K	5%	1/8W	
R44	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R45	1-249-338-11	CARBON MELF	1.8K	5%	1/8W	
R46	1-249-344-11	CARBON MELF	5.6K	5%	1/8W	
R47	⚠.1-249-409-11	CARBON(SMALL)	220	5%	1/4W	F
R61	1-249-359-11	CARBON MELF	100K	5%	1/8W	
R62	1-249-355-11	CARBON MELF	47K	5%	1/8W	
R63	1-249-315-11	CARBON MELF	22	5%	1/8W	
R81	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R82	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R83	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R84	1-249-335-11	CARBON MELF	1K	5%	1/8W	

Ref.No.	Part No.	Description				
R85	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R86	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R87	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R88	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R89	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R90	1-249-347-11	CARBON MELF	10K	5%	1/8W	
R91	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R92	⚠.1-249-401-11	CARBON(SMALL)	47	5%	1/4W	F
R101	1-249-341-11	CARBON MELF	3.3K	5%	1/8W	
R102	1-249-332-11	CARBON MELF	560	5%	1/8W	
R103	1-249-335-11	CARBON MELF	1K	5%	1/8W	
R104	1-249-328-11	CARBON MELF	270	5%	1/8W	
R105	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R106	1-249-339-11	CARBON MELF	2.2K	5%	1/8W	
R107	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R108	1-249-323-11	CARBON MELF	100	5%	1/8W	
R109	1-249-343-11	CARBON MELF	4.7K	5%	1/8W	
R110	⚠.1-249-405-11	CARBON(SMALL)	100	5%	1/4W	F
RV21	1-238-015-11	RES, ADJ, CARBON 4.7K				
RV22	1-238-017-11	RES, ADJ, CARBON 22K				
RV24	1-238-019-11	RES, ADJ, CARBON 47K				
RV25	1-238-019-11	RES, ADJ, CARBON 47K				
T21	1-404-852-11	COIL, DISCRIMINATOR (PRIMARY)				
T22	1-404-851-11	COIL, DISCRIMINATOR (SECONDARL)				
TM1	*1-537-225-11	TERMINAL BOARD (ANT (F) TYPE)				
TP1	*1-560-060-00	PIN, CONNECTOR 2P				
XT81	1-577-126-11	VIBRATOR, CRYSTAL 7.2MHz				

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

EXCEPT FOR TUNER BOARD

Ref.No.	Part No.	Description			
901	*1-631-642-11	PC BOARD, VOL LED			
902	*1-631-900-11	PC BOARD, BALANCE VOL			
903	*1-631-649-11	PC BOARD, VIDEO (3)			
904	*1-631-638-11	PC BOARD, KEY BOARD			
905	*A-4333-167-A	MOUNTED PCB, DISPLAY			4,FL301
906	*1-631-637-11	PC BOARD, MOTOR VOLUME			
907	*1-631-647-11	PC BOARD, HEADPHONE			
908	*1-631-646-11	PC BOARD, SPEAKER SWITCH			
909	*1-631-641-11	PC BOARD, BPF			
910	*1-631-640-11	PC BOARD, POWER			
911	*A-4333-163-A	MOUNTED PCB, MAIN			52,920
912	*A-4303-169-A	MOUNTED PCB, TUNER (TCB007-2MJ)			
913	*1-631-644-11	PC BOARD, SURROUND AMPLIFIER			
914	*1-631-648-11	PC BOARD, SPEAKER TERMINAL			
915	*1-631-645-11	PC BOARD, SPEAKER TERMINAL (SURROUND)			
916	*A-4333-171-A	MOUNTED PCB, VIDEO			
917	*A-4333-174-A	MOUNTED PCB, DIGITAL			
918	*1-533-185-11	HOLDER, FUSE			
919	*1-533-213-31	HOLDER, FUSE			
920	*1-565-514-11	SOCKET, CONNECTOR 2P			
BA401	1-528-120-00	BATTERY, LITHIUM (CR-2025)			
C201	1-124-472-11	ELECT	470MF	20%	6.3V
C202	1-123-875-11	ELECT	10MF	20%	50V
C203	1-123-875-11	ELECT	10MF	20%	50V
C204	1-123-875-11	ELECT	10MF	20%	50V
C205	1-123-875-11	ELECT	10MF	20%	50V
C206	1-124-472-11	ELECT	470MF	20%	6.3V
C207	1-123-875-11	ELECT	10MF	20%	50V
C208	1-123-875-11	ELECT	10MF	20%	50V
C209	1-123-875-11	ELECT	10MF	20%	50V
C210	1-124-120-11	ELECT	220MF	20%	16V
C211	1-124-472-11	ELECT	470MF	20%	6.3V
C212	1-123-875-11	ELECT	10MF	20%	50V
C213	1-124-472-11	ELECT	470MF	20%	6.3V
C214	1-123-875-11	ELECT	10MF	20%	50V
C301	1-161-494-00	CERAMIC	0.022MF		25V
C302	1-164-159-11	CERAMIC	0.1MF		50V
C303	1-162-210-31	CERAMIC	30PF	5%	50V
C304	1-162-210-31	CERAMIC	30PF	5%	50V
C305	1-164-159-11	CERAMIC	0.1MF		50V
C306	1-161-494-00	CERAMIC	0.022MF		25V
C307	1-164-159-11	CERAMIC	0.1MF		50V
C308	1-164-159-11	CERAMIC	0.1MF		50V
C309	1-124-477-11	ELECT	47MF	20%	16V
C310	1-164-159-11	CERAMIC	0.1MF		50V

Ref.No.	Part No.	Description			
C311	1-123-875-11	ELECT	10MF	20%	50V
C352	1-126-233-11	ELECT	22MF	20%	50V
C353	1-130-471-00	MYLAR	0.001MF	5%	50V
C354	1-130-471-00	MYLAR	0.001MF	5%	50V
C356	1-124-925-11	ELECT	2.2MF	20%	50V
C357	1-130-475-00	MYLAR	0.0022MF	5%	50V
C358	1-130-475-00	MYLAR	0.0022MF	5%	50V
C359	1-124-925-11	ELECT	2.2MF	20%	50V
C360	1-130-481-00	MYLAR	0.0068MF	5%	50V
C361	1-130-481-00	MYLAR	0.0068MF	5%	50V
C362	1-124-925-11	ELECT	2.2MF	20%	50V
C363	1-136-157-00	FILM	0.022MF	5%	50V
C364	1-136-157-00	FILM	0.022MF	5%	50V
C365	1-124-925-11	ELECT	2.2MF	20%	50V
C366	1-136-165-00	FILM	0.1MF	5%	50V
C367	1-136-165-00	FILM	0.1MF	5%	50V
C368	1-124-925-11	ELECT	2.2MF	20%	50V
C369	1-130-471-00	MYLAR	0.001MF	5%	50V
C370	1-130-471-00	MYLAR	0.001MF	5%	50V
C371	1-124-925-11	ELECT	2.2MF	20%	50V
C372	1-130-475-00	MYLAR	0.0022MF	5%	50V
C373	1-130-475-00	MYLAR	0.0022MF	5%	50V
C374	1-124-925-11	ELECT	2.2MF	20%	50V
C375	1-130-477-00	MYLAR	0.0033MF	5%	50V
C376	1-130-477-00	MYLAR	0.0033MF	5%	50V
C377	1-124-925-11	ELECT	2.2MF	20%	50V
C378	1-136-155-00	FILM	0.015MF	5%	50V
C379	1-136-155-00	FILM	0.015MF	5%	50V
C380	1-124-925-11	ELECT	2.2MF	20%	50V
C381	1-136-161-00	FILM	0.047MF	5%	50V
C382	1-136-161-00	FILM	0.047MF	5%	50V
C383	1-123-875-11	ELECT	10MF	20%	50V
C384	1-124-925-11	ELECT	2.2MF	20%	50V
C401	1-126-094-11	ELECT	4.7MF	20%	25V
C402	1-162-282-31	CERAMIC	100PF	10%	50V
C403	1-124-963-11	ELECT	33MF	20%	16V
C404	1-130-480-00	MYLAR	0.0056MF	5%	50V
C405	1-130-473-00	MYLAR	0.0015MF	5%	50V
C406	1-124-927-11	ELECT	4.7MF	20%	50V
C407	1-164-159-11	CERAMIC	0.1MF		50V
C408	1-123-875-11	ELECT	10MF	20%	50V
C409	1-123-875-11	ELECT	10MF	20%	50V
C410	1-162-294-31	CERAMIC	0.001MF	10%	50V
C411	1-162-294-31	CERAMIC	0.001MF	10%	50V
C412	1-123-875-11	ELECT	10MF	20%	50V

Ref.No.	Part No.	Description			
C414	1-123-875-11	ELECT	10MF	20%	50V
C415	1-123-875-11	ELECT	10MF	20%	50V
C416	1-123-875-11	ELECT	10MF	20%	50V
C418	1-164-159-11	CERAMIC	0.1MF		50V
C419	1-123-875-11	ELECT	10MF	20%	50V
C420	1-123-875-11	ELECT	10MF	20%	50V
C421	1-124-499-11	ELECT	1MF	20%	50V
C422	1-124-499-11	ELECT	1MF	20%	50V
C425	1-126-157-11	ELECT	10MF	20%	16V
C426	1-126-157-11	ELECT	10MF	20%	16V
C427	1-164-159-11	CERAMIC	0.1MF		50V
C451	1-126-094-11	ELECT	4.7MF	20%	25V
C452	1-162-282-31	CERAMIC	100PF	10%	50V
C453	1-124-963-11	ELECT	33MF	20%	16V
C454	1-130-480-00	MYLAR	0.0056MF	5%	50V
C455	1-130-473-00	MYLAR	0.0015MF	5%	50V
C456	1-124-927-11	ELECT	4.7MF	20%	50V
C458	1-123-875-11	ELECT	10MF	20%	50V
C459	1-123-875-11	ELECT	10MF	20%	50V
C462	1-123-875-11	ELECT	10MF	20%	50V
C466	1-123-875-11	ELECT	10MF	20%	50V
C467	1-164-159-11	CERAMIC	0.1MF		50V
C468	1-124-477-11	ELECT	47MF	20%	25V
C469	1-126-101-11	ELECT	100MF	20%	16V
C470	1-162-294-31	CERAMIC	0.001MF	10%	50V
C471	1-136-177-00	FILM	1MF	5%	50V
C472	1-164-159-11	CERAMIC	0.1MF		50V
C473	1-164-159-11	CERAMIC	0.1MF		50V
C474	1-162-210-31	CERAMIC	30PF	5%	50V
C475	1-162-210-31	CERAMIC	30PF	5%	50V
C476	1-126-157-11	ELECT	10MF	20%	16V
C477	1-164-159-11	CERAMIC	0.1MF		50V
C478	1-124-927-11	ELECT	4.7MF	20%	50V
C501	1-164-159-11	CERAMIC	0.1MF		50V
C502	1-123-875-11	ELECT	10MF	20%	50V
C503	1-164-159-11	CERAMIC	0.1MF		50V
C504	1-123-875-11	ELECT	10MF	20%	50V
C505	1-124-482-11	ELECT	33MF	20%	25V
C506	1-164-159-11	CERAMIC	0.1MF		50V
C507	1-130-481-00	MYLAR	0.0068MF	5%	50V
C508	1-162-207-31	CERAMIC	22PF	5%	50V
C509	1-162-207-31	CERAMIC	22PF	5%	50V
C510	1-164-159-11	CERAMIC	0.1MF		50V
C513	1-164-159-11	CERAMIC	0.1MF		50V
C514	1-164-159-11	CERAMIC	0.1MF		50V
C515	1-164-159-11	CERAMIC	0.1MF		50V
C516	1-164-159-11	CERAMIC	0.1MF		50V
C519	1-161-379-00	CERAMIC	0.01MF	20%	16V
C520	1-162-211-31	CERAMIC	33PF	5%	50V
C521	1-162-211-31	CERAMIC	33PF	5%	50V
C522	1-126-233-11	ELECT	22MF	20%	25V
C523	1-164-159-11	CERAMIC	0.1MF		50V
C524	1-162-294-31	CERAMIC	0.001MF	10%	50V
C525	1-126-233-11	ELECT	22MF	20%	25V
C526	1-164-159-11	CERAMIC	0.1MF		50V
C528	1-162-294-31	CERAMIC	0.001MF	10%	50V
C529	1-162-294-31	CERAMIC	0.001MF	10%	50V
C531	1-164-159-11	CERAMIC	0.1MF		50V
C532	1-123-875-11	ELECT	10MF	20%	50V
C534	1-123-875-11	ELECT	10MF	20%	50V
C535	1-164-159-11	CERAMIC	0.1MF		50V
C536	1-164-159-11	CERAMIC	0.1MF		50V
C537	1-162-294-31	CERAMIC	0.001MF	10%	50V
C600	1-164-159-11	CERAMIC	0.1MF		50V
C601	1-123-875-11	ELECT	10MF	20%	50V
C602	1-123-875-11	ELECT	10MF	20%	50V
C603	1-123-875-11	ELECT	10MF	20%	50V
C604	1-123-875-11	ELECT	10MF	20%	50V
C606	1-123-875-11	ELECT	10MF	20%	50V
C607	1-126-233-11	ELECT	22MF	20%	25V
C608	1-130-471-00	MYLAR	0.001MF	5%	50V
C609	1-130-471-00	MYLAR	0.001MF	5%	50V
C610	1-164-062-11	CERAMIC	47PF	5%	50V
C611	1-126-233-11	ELECT	22MF	20%	25V
C612	1-136-153-00	FILM	0.01MF	5%	50V
C613	1-164-159-11	CERAMIC	0.1MF		50V
C614	1-126-233-11	ELECT	22MF	20%	25V
C616	1-164-159-11	CERAMIC	0.1MF		50V
C617	1-126-233-11	ELECT	22MF	20%	25V
C618	1-126-233-11	ELECT	22MF	20%	25V
C619	1-123-875-11	ELECT	10MF	20%	50V
C620	1-136-153-00	FILM	0.01MF	5%	50V
C621	1-130-473-00	MYLAR	0.0015MF	5%	50V
C622	1-130-478-00	MYLAR	0.0039MF	5%	50V
C623	1-162-286-31	CERAMIC	220PF	10%	50V
C624	1-164-159-11	CERAMIC	0.1MF		50V
C625	1-123-875-11	ELECT	10MF	20%	50V
C626	1-124-482-11	ELECT	33MF	20%	25V
C628	1-130-473-00	MYLAR	0.0015MF	5%	50V
C629	1-162-286-31	CERAMIC	220PF	10%	50V
C630	1-130-478-00	MYLAR	0.0039MF	5%	50V
C631	1-126-233-11	ELECT	22MF	20%	25V
C632	1-123-875-11	ELECT	10MF	20%	50V
C633	1-164-159-11	CERAMIC	0.1MF		50V
C634	1-164-159-11	CERAMIC	0.1MF		50V
C635	1-136-153-00	FILM	0.01MF	5%	50V
C636	1-124-482-11	ELECT	33MF	20%	25V
C637	1-164-159-11	CERAMIC	0.1MF		50V
C638	1-123-875-11	ELECT	10MF	20%	50V
C639	1-164-159-11	CERAMIC	0.1MF		50V
C640	1-123-875-11	ELECT	10MF	20%	50V
C641	1-164-159-11	CERAMIC	0.1MF		50V
C643	1-123-875-11	ELECT	10MF	20%	50V
C644	1-123-875-11	ELECT	10MF	20%	50V
C645	1-164-159-11	CERAMIC	0.1MF		50V
C646	1-126-233-11	ELECT	22MF	20%	25V
C647	1-126-233-11	ELECT	22MF	20%	25V
C648	1-126-233-11	ELECT	22MF	20%	25V
C649	1-126-233-11	ELECT	22MF	20%	25V
C650	1-164-159-11	CERAMIC	0.1MF		50V
C651	1-123-875-11	ELECT	10MF	20%	50V
C652	1-123-875-11	ELECT	10MF	20%	50V
C653	1-123-875-11	ELECT	10MF	20%	50V
C654	1-123-875-11	ELECT	10MF	20%	50V

Ref.No.	Part No.	Description			
C655	1-126-233-11	ELECT	22MF	20%	25V
C656	1-123-875-11	ELECT	10MF	20%	50V
C657	1-126-233-11	ELECT	22MF	20%	25V
C658	1-130-471-00	MYLAR	0.001MF	5%	50V
C659	1-130-471-00	MYLAR	0.001MF	5%	50V
C660	1-164-062-11	CERAMIC	47PF	5%	50V
C661	1-126-233-11	ELECT	22MF	20%	25V
C662	1-136-153-00	FILM	0.01MF	5%	50V
C663	1-164-159-11	CERAMIC	0.1MF		50V
C664	1-164-159-11	CERAMIC	0.1MF		50V
C665	1-164-159-11	CERAMIC	0.1MF		50V
C667	1-126-233-11	ELECT	22MF	20%	25V
C668	1-126-233-11	ELECT	22MF	20%	25V
C669	1-123-875-11	ELECT	10MF	20%	50V
C670	1-136-153-00	FILM	0.01MF	5%	50V
C671	1-130-473-00	MYLAR	0.0015MF	5%	50V
C672	1-130-478-00	MYLAR	0.0039MF	5%	50V
C673	1-162-286-31	CERAMIC	220PF	10%	50V
C675	1-123-875-11	ELECT	10MF	20%	50V
C678	1-130-473-00	MYLAR	0.0015MF	5%	50V
C679	1-162-286-31	CERAMIC	220PF	10%	50V
C680	1-130-478-00	MYLAR	0.0039MF	5%	50V
C681	1-126-233-11	ELECT	22MF	20%	25V
C682	1-164-159-11	CERAMIC	0.1MF		50V
C683	1-164-159-11	CERAMIC	0.1MF		50V
C684	1-164-159-11	CERAMIC	0.1MF		50V
C685	1-136-153-00	FILM	0.01MF	5%	50V
C701	1-102-947-00	CERAMIC	10PF	0.5PF	50V
C702	1-102-978-00	CERAMIC	220PF	5%	50V
C703	1-124-477-11	ELECT	47MF	20%	25V
C704	1-102-230-00	CERAMIC	4PF	0.25PF	500V
C705	1-124-499-11	ELECT	1MF	20%	50V
C706	1-102-959-00	CERAMIC	22PF	5%	50V
C707	1-126-233-11	ELECT	22MF	20%	50V
C708	1-124-477-11	ELECT	47MF	20%	25V
C709	1-124-477-11	ELECT	47MF	20%	25V
C710	1-124-477-11	ELECT	47MF	20%	25V
C711	1-102-233-00	CERAMIC	33PF	10%	500V
C712	1-102-233-00	CERAMIC	33PF	10%	500V
C713	1-124-463-00	ELECT	0.1MF	20%	50V
C715	1-124-463-00	ELECT	0.1MF	20%	50V
C716	1-136-157-00	FILM	0.022MF	5%	50V
C716	1-136-161-91	(Canadian)...FILM	0.047MF	5%	50V
C717	1-136-161-91	(Canadian)...FILM	0.047MF	5%	50V
C721	1-124-463-00	ELECT	0.1MF	20%	50V
C722	1-124-442-00	ELECT	330MF	20%	6.3V
C751	1-102-947-00	CERAMIC	10PF	0.5PF	50V
C752	1-102-978-00	CERAMIC	220PF	5%	50V
C753	1-124-477-11	ELECT	47MF	20%	25V
C754	1-102-230-00	CERAMIC	4PF	0.25PF	500V
C755	1-124-499-11	ELECT	1MF	20%	50V
C756	1-102-959-00	CERAMIC	22PF	5%	50V
C757	1-126-233-11	ELECT	22MF	20%	50V
C758	1-124-477-11	ELECT	47MF	20%	25V
C759	1-124-477-11	ELECT	47MF	20%	25V
C760	1-124-477-11	ELECT	47MF	20%	25V

Ref.No.	Part No.	Description			
C761	1-102-233-00	CERAMIC	33PF	10%	500V
C762	1-102-233-00	CERAMIC	33PF	10%	500V
C763	1-124-463-00	ELECT	0.1MF	20%	50V
C765	1-124-463-00	ELECT	0.1MF	20%	50V
C766	1-136-157-00	FILM	0.022MF	5%	50V
C766	1-136-161-91	(Canadian)...FILM	0.047MF	5%	50V
C767	1-136-161-91	(Canadian)...FILM	0.047MF	5%	50V
C804	1-124-557-11	ELECT	1000MF	20%	25V
C805	1-124-477-11	ELECT	47MF	20%	16V
C806	1-124-499-11	ELECT	1MF	20%	50V
C807	1-123-875-11	ELECT	10MF	20%	50V
C808	1-124-464-11	ELECT	0.22MF	20%	50V
C810	1-125-573-11	ELECT(BLOCK)	12000MF	20%	71V
C811	1-125-573-11	ELECT(BLOCK)	12000MF	20%	71V
C812	1-123-875-11	ELECT	10MF	20%	50V
C813	1-124-618-11	ELECT	2200MF	20%	35V
C814	1-124-618-11	ELECT	2200MF	20%	35V
C815	1-123-605-00	ELECT	100MF	20%	100V
C816	1-123-605-00	ELECT	100MF	20%	100V
C817	1-124-563-11	ELECT	2200MF	20%	25V
C818	1-124-557-11	ELECT	1000MF	20%	25V
C819	1-124-477-11	ELECT	47MF	20%	16V
C820	1-124-477-11	ELECT	47MF	20%	16V
C821	1-124-477-11	ELECT	47MF	20%	16V
C825	1-124-902-00	ELECT	0.47MF	20%	50V
C831	1-124-927-11	ELECT	4.7MF	20%	50V
C832	1-162-282-31	CERAMIC	100PF	10%	50V
C833	1-126-233-11	ELECT	22MF	20%	50V
C835	1-124-463-00	ELECT	0.1MF	20%	50V
C836	1-136-157-00	FILM	0.022MF	5%	50V
C836	1-136-161-91	(Canadian)...FILM	0.047MF	5%	50V
C837	1-124-910-11	ELECT	47MF	20%	35V
C838	1-124-910-11	ELECT	47MF	20%	35V
C840	1-136-161-91	(Canadian)...FILM	0.047MF	5%	50V
C881	1-124-927-11	ELECT	4.7MF	20%	50V
C882	1-162-282-31	CERAMIC	100PF	10%	50V
C883	1-126-233-11	ELECT	22MF	20%	50V
C885	1-124-463-00	ELECT	0.1MF	20%	50V
C886	1-136-157-00	FILM	0.022MF	5%	50V
C886	1-136-161-91	(Canadian)...FILM	0.047MF	5%	50V
C890	1-136-161-91	(Canadian)...FILM	0.047MF	5%	50V
C901	⚠1-161-744-00	CERAMIC	0.01MF		400V
CF301	1-577-360-11	VIBRATOR, CERAMIC (6MHz)			
CF302	1-567-170-00	OSCILLATOR, CERAMIC (4MHz)			
CF401	1-567-797-11	VIBRATOR, CERAMIC (12MHz)			
CNJ701	1-507-796-71	JACK (HEAD)			
⚠CNJ901	1-540-059-11	OUTLET, AC (POLAR)			
CNP201	*1-564-342-11	PIN, CONNECTOR 8P			
CNP202	*1-564-505-11	PLUG, CONNECTOR 2P			
CNP351	*1-564-666-11	PIN, CONNECTOR 10P			
CNP352	*1-564-338-00	PIN, CONNECTOR 4P			
CNP361	*1-506-503-11	PIN, CONNECTOR 9P			
CNP401	*1-564-506-11	PLUG, CONNECTOR 3P			
CNP403	*1-564-506-11	PLUG, CONNECTOR 3P			
CNP404	*1-564-506-11	PLUG, CONNECTOR 3P			
CNP405	*1-564-341-11	PIN, CONNECTOR 7P			

Note:
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Note:
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Ref.No.	Part No.	Description
CNP406	*1-564-342-61	PIN, CONNECTOR 8P
CNP407	*1-568-276-11	SOCKET, CONNECTOR 10P
CNP409	1-568-269-11	SOCKET, CONNECTOR 3P
CNP410	*1-564-339-00	PIN, CONNECTOR 5P
CNP411	*1-564-341-11	PIN, CONNECTOR 7P
CNP412	*1-564-517-11	PLUG, CONNECTOR 2P
CNP413	*1-564-518-11	PLUG, CONNECTOR 3P
CNP415	1-568-269-11	SOCKET, CONNECTOR 3P
CNP416	*1-564-338-00	PIN, CONNECTOR 4P
CNP417	*1-564-506-11	PLUG, CONNECTOR 3P
CNP422	*1-564-339-71	PIN, CONNECTOR 5P
CNP423	*1-564-337-00	PIN, CONNECTOR 3P
CNP424	*1-564-510-11	PLUG, CONNECTOR 7P
CNP427	*1-564-505-11	PLUG, CONNECTOR 2P
CNP501	*1-564-342-61	PIN, CONNECTOR 8P
CNP502	*1-564-341-11	PIN, CONNECTOR 7P
CNP503	*1-564-337-61	PIN, CONNECTOR 3P
CNP504	*1-564-337-71	PIN, CONNECTOR 3P
CNP601	*1-564-506-11	PLUG, CONNECTOR 3P
CNP602	*1-564-506-11	PLUG, CONNECTOR 3P
CNP603	*1-564-506-11	PLUG, CONNECTOR 3P
CNP604	*1-564-339-71	PIN, CONNECTOR 5P
CNP701	*1-564-505-11	PLUG, CONNECTOR 2P
CNP751	*1-564-505-11	PLUG, CONNECTOR 2P
CNP801	*1-564-104-00	PIN, CONNECTOR 3P
CNP803	*1-564-339-81	PIN, CONNECTOR 5P
CNP804	*1-564-242-00	PIN, CONNECTOR 5P
CNP806	*1-564-104-00	PIN, CONNECTOR 3P
CNP807	*1-564-339-81	PIN, CONNECTOR 5P
CNP831	*1-564-337-00	PIN, CONNECTOR 3P
⚠CNP901	1-557-577-11	CORD, POWER
CNP902	*1-535-140-00	BASE POST 22MM (10MM PITCH) 3P
COR401	*1-565-513-11	PIN, CONNECTOR 2P
CP801	1-102-394-11	CERAMIC 0.01MF 250V
CP802	1-102-394-11	CERAMIC 0.01MF 250V
CP803	1-102-394-11	CERAMIC 0.01MF 250V
CP804	1-102-394-11	CERAMIC 0.01MF 250V
CP805	1-102-394-11	CERAMIC 0.01MF 250V
D301	8-719-200-77	DIODE 10E2N
D302	8-719-310-60	DIODE SEL1510C-C
D303	8-719-310-77	DIODE SEL1810W
D304	8-719-310-77	DIODE SEL1810W
D305	8-719-310-77	DIODE SEL1810W
D306	8-719-310-77	DIODE SEL1810W
D307	8-719-914-11	DIODE HZ4ALL
D308	8-719-000-26	DIODE US1060M
D310	8-719-000-26	DIODE US1060M
D311	8-719-000-26	DIODE US1060M
D313	8-719-000-26	DIODE US1060M
D314	8-719-000-26	DIODE US1060M
D315	8-719-000-26	DIODE US1060M
D316	8-719-000-26	DIODE US1060M
D317	8-719-000-26	DIODE US1060M
D318	8-719-000-26	DIODE US1060M
D319	8-719-000-26	DIODE US1060M
D320	8-719-000-26	DIODE US1060M

Ref.No.	Part No.	Description
D321	8-719-000-26	DIODE US1060M
D322	8-719-000-26	DIODE US1060M
D324	8-719-000-26	DIODE US1060M
D325	8-719-000-26	DIODE US1060M
D326	8-719-000-26	DIODE US1060M
D327	8-719-000-26	DIODE US1060M
D328	8-719-000-26	DIODE US1060M
D329	8-719-000-26	DIODE US1060M
D330	8-719-000-26	DIODE US1060M
D331	8-719-000-26	DIODE US1060M
D332	8-719-000-26	DIODE US1060M
D335	8-719-304-14	DIODE SEL2510W
D336	8-719-304-14	DIODE SEL2510W
D337	8-719-304-14	DIODE SEL2510W
D338	8-719-304-14	DIODE SEL2510W
D339	8-719-304-14	DIODE SEL2510W
D340	8-719-304-14	DIODE SEL2510W
D351	8-719-000-26	DIODE US1060M
D352	8-719-000-26	DIODE US1060M
D353	8-719-000-26	DIODE US1060M
D354	8-719-000-26	DIODE US1060M
D355	8-719-000-26	DIODE US1060M
D356	8-719-000-26	DIODE US1060M
D357	8-719-000-26	DIODE US1060M
D358	8-719-000-26	DIODE US1060M
D359	8-719-000-26	DIODE US1060M
D360	8-719-000-26	DIODE US1060M
D361	8-719-310-78	DIODE SEL1810W-C
D362	8-719-000-26	DIODE US1060M
D363	8-719-000-26	DIODE US1060M
D363A	8-719-310-78	DIODE SEL1810W-C
D364	8-719-000-26	DIODE US1060M
D402	8-719-000-26	DIODE US1060M
D403	8-719-000-26	DIODE US1060M
D404	8-719-000-26	DIODE US1060M
D405	8-719-000-26	DIODE US1060M
D406	8-719-000-26	DIODE US1060M
D410	8-719-304-14	DIODE SEL2510W
D501	8-719-000-26	DIODE US1060M
D503	8-719-000-26	DIODE US1060M
D611	8-719-000-26	DIODE US1060M
D612	8-719-000-26	DIODE US1060M
D661	8-719-000-26	DIODE US1060M
D662	8-719-000-26	DIODE US1060M
D701	8-719-000-26	DIODE US1060M
D702	8-719-000-78	DIODE UZL-7L2
D703	8-719-933-41	DIODE HZS6C3L
D704	8-719-000-26	DIODE US1060M
D705	8-719-000-26	DIODE US1060M
D706	8-719-000-26	DIODE US1060M
D707	8-719-000-26	DIODE US1060M
D708	8-719-000-26	DIODE US1060M
D709	8-719-000-26	DIODE US1060M
D710	8-719-000-26	DIODE US1060M
D711	8-719-000-26	DIODE US1060M
D712	8-719-000-26	DIODE US1060M

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Ref.No.	Part No.	Description
D713	8-719-000-26	DIODE US1060M
D714	8-719-000-26	DIODE US1060M
D715	8-719-000-26	DIODE US1060M
D716	8-719-000-26	DIODE US1060M
D717	8-719-000-26	DIODE US1060M
D718	8-719-000-26	DIODE US1060M
D719	8-719-000-26	DIODE US1060M
D720	8-719-000-26	DIODE US1060M
D721	8-719-000-26	DIODE US1060M
D722	8-719-000-26	DIODE US1060M
D723	8-719-000-26	DIODE US1060M
D724	8-719-000-26	DIODE US1060M
D725	8-719-000-26	DIODE US1060M
D726	8-719-000-26	DIODE US1060M
D727	8-719-000-26	DIODE US1060M
D728	8-719-000-26	DIODE US1060M
D751	8-719-000-26	DIODE US1060M
D752	8-719-000-78	DIODE UZL-7L2
D753	8-719-933-41	DIODE HZS6C3L
D754	8-719-000-26	DIODE US1060M
D755	8-719-000-26	DIODE US1060M
D756	8-719-000-26	DIODE US1060M
D757	8-719-000-26	DIODE US1060M
D758	8-719-000-26	DIODE US1060M
D759	8-719-000-26	DIODE US1060M
D760	8-719-000-26	DIODE US1060M
D761	8-719-000-26	DIODE US1060M
D763	8-719-000-26	DIODE US1060M
D764	8-719-000-26	DIODE US1060M
D765	8-719-000-26	DIODE US1060M
D766	8-719-000-26	DIODE US1060M
D771	8-719-000-26	DIODE US1060M
D772	8-719-000-26	DIODE US1060M
D773	8-719-000-26	DIODE US1060M
D774	8-719-000-26	DIODE US1060M
D775	8-719-000-26	DIODE US1060M
D776	8-719-000-26	DIODE US1060M
D777	8-719-000-26	DIODE US1060M
D778	8-719-000-26	DIODE US1060M
D801	8-719-302-38	DIODE RBV-602-01
D802	8-719-000-26	DIODE US1060M
D803	8-719-511-40	DIODE S1VB40
D807	8-719-000-06	DIODE MC921
D808	8-719-933-41	DIODE HZS6C3L
D809	8-719-933-41	DIODE HZS6C3L
D810	8-719-941-11	DIODE HZ4ALL
D811	8-719-000-26	DIODE US1060M
D812	8-719-002-45	DIODE UZL-27M
D813	8-719-312-09	DIODE RBA-402
D814	8-719-511-40	DIODE S1VB40
D815	8-719-014-66	DIODE UZP-5.6B
D816	8-719-000-26	DIODE US1060M
D817	8-719-200-77	DIODE 10E2N
D818	8-719-200-77	DIODE 10E2N
D831	8-719-000-26	DIODE US1060M
D832	8-719-000-26	DIODE US1060M
D833	8-719-000-26	DIODE US1060M
D881	8-719-000-26	DIODE US1060M

Ref.No.	Part No.	Description
F801	⚠1-532-782-21	FUSE, MICRO (SECONDARY)(4A)
F802	⚠1-532-782-21	FUSE, MICRO (SECONDARY)(4A)
F901	⚠1-532-598-00	FUSE, GLASS TUBE (125V/4A)
F902	⚠1-532-509-00	FUSE, GLASS TUBE (125V/6.3A)
FL301	1-519-522-11	INDICATOR TUBE, FLUORESCENT
IC201	8-759-208-08	IC TC4052BPHB
IC202	8-759-601-41	IC M4053BP
IC203	8-759-208-08	IC TC4052BPHB
IC204	8-759-030-67	IC MC14576AP
IC205	8-759-030-67	IC MC14576AP
IC206	8-759-030-67	IC MC14576AP
IC301	8-759-988-90	IC MB88515B-1099N
IC302	8-759-146-10	IC UPD75216AGF-573-3BE
IC303	8-749-920-59	IC A1QH3020S
IC305	8-759-202-11	IC TC74HC00P
IC350	8-759-600-02	IC M5218L
IC351	8-759-600-02	IC M5218L
IC352	8-759-600-02	IC M5218L
IC353	8-759-600-02	IC M5218L
IC354	8-759-600-02	IC M5218L
IC355	8-759-600-02	IC M5218L
IC356	8-759-601-41	IC M4053BP
IC357	8-759-601-41	IC M4053BP
IC401	8-759-106-41	IC UPC4570C
IC402	8-759-805-14	IC LC7822
IC403	8-759-805-14	IC LC7822
IC404	8-759-112-93	IC UPC4570HA-1
IC405	8-759-990-82	IC TL082CP
IC406	8-759-240-81	IC TC14081BP
IC411	8-759-146-09	IC UPD78C14
IC412	8-759-820-62	IC LB1639
IC421	8-759-112-93	IC UPC4570HA-1
IC501	8-759-202-12	IC TC74HC02P
IC503	8-759-202-13	IC MC74HCU04P
IC504	8-759-973-98	IC YM3623B
IC506	8-752-331-87	IC CXD1160AP
IC507	8-752-331-87	IC CXD1160AP
IC508	8-752-328-72	IC CXD2550P
IC509	8-759-979-94	IC CXD1355Q
IC510	8-759-973-04	IC MSM41464-10RS-K
IC512	8-759-979-94	IC CXD1355Q
IC513	8-759-973-04	IC MSM41464-10RS-K
IC514	8-759-604-29	IC M5F7805
IC515	8-759-604-29	IC M5F7805
IC516	8-759-604-29	IC M5F7805
IC517	8-759-604-41	IC M5F79M05
IC518	8-759-004-63	IC MC74HC125N
IC519	8-759-202-11	IC TC74HC00P
IC520	8-759-202-12	IC TC74HC02P
IC601	8-759-987-07	IC PCM1701P
IC602	8-759-106-41	IC UPC4570C
IC603	8-759-145-79	IC UPD6372CX
IC604	8-759-106-41	IC UPC4570C
IC605	8-759-145-79	IC UPD6372CX
IC606	8-759-106-41	IC UPC4570C
IC609	8-759-106-41	IC UPC4570C

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description
IC610	8-759-989-42	IC AK5326-VP
IC651	8-759-987-07	IC PCM1701P
IC652	8-759-106-41	IC UPC4570C
IC801	8-759-604-39	IC M5F78M12
IC802	8-759-604-39	IC M5F78M12
IC803	8-759-604-45	IC M5F79M12
IC804	8-749-920-76	IC SI-18752
IC854	8-749-920-76	IC SI-18752
J201	1-566-846-11	CONNECTOR, (S) TERMINAL 4P (VIDEO 2 S VIDEO IN)
J202	1-566-846-11	CONNECTOR, (S) TERMINAL 4P (VIDEO 1 S VIDEO OUT)
J203	1-566-846-11	CONNECTOR, (S) TERMINAL 4P (VIDEO 1 S VIDEO IN)
J204	1-566-846-11	CONNECTOR, (S) TERMINAL 4P (MONITOR S VIDEO OUT)
J205	1-565-319-11	JACK, PIN 2P (VIDEO 2/CDV VIDEO IN,MONITOR VIDEO OUT)
J206	1-565-319-11	JACK, PIN 2P(VIDEO 1 VIDEO OUT/IN)
J401	1-563-136-31	JACK, PIN 3P(VIDEO 3 INPUT VIDEO/AUDIO)
J402	1-565-320-11	JACK, PIN 6P (PHONO IN,CD IN, DAT REC OUT)
J403	1-565-320-11	JACK, PIN 6P(DAT IN,TAPE 1 REC OUT/IN)
J404	1-565-320-11	JACK, PIN 6P (VIDEO 2 CDV AUDIO IN,VIDEO 1 AUDIO OUT/IN)
J405	1-565-320-11	JACK, PIN 6P(TAPE 2 REC OUT/IN, PREOUT)
J501	1-568-750-11	JACK, PIN (1P SHIELD TYPE) (DIGITAL INPUT COAXIAL)
L301	1-410-509-11	INDUCTOR 10UH
L302	1-410-509-11	INDUCTOR 10UH
L401	1-410-324-11	INDUCTOR 4.7UH
L501	1-410-324-11	INDUCTOR 4.7UH
L502	1-410-324-11	INDUCTOR 4.7UH
L503	1-410-324-11	INDUCTOR 4.7UH
L504	1-410-324-11	INDUCTOR 4.7UH
L505	1-410-324-11	INDUCTOR 4.7UH
L701	*1-420-872-00	COIL, AIR CORE
L751	*1-420-872-00	COIL, AIR CORE
L801	1-410-509-11	INDUCTOR 10UH
L802	1-410-509-11	INDUCTOR 10UH
L803	1-410-509-11	INDUCTOR 10UH
L831	*1-420-872-00	COIL, AIR CORE
L881	*1-420-872-00	COIL, AIR CORE
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q202	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q203	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q204	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q205	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q206	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q301	8-729-900-63	TRANSISTOR DTA124ES
Q302	8-729-900-63	TRANSISTOR DTA124ES
Q303	8-729-900-63	TRANSISTOR DTA124ES
Q304	8-729-900-63	TRANSISTOR DTA124ES
Q305	8-729-900-63	TRANSISTOR DTA124ES
Q306	8-729-900-63	TRANSISTOR DTA124ES
Q307	8-729-900-63	TRANSISTOR DTA124ES
Q308	8-729-900-63	TRANSISTOR DTA124ES
Q309	8-729-900-63	TRANSISTOR DTA124ES
Q310	8-729-900-63	TRANSISTOR DTA124ES
Q311	8-729-900-63	TRANSISTOR DTA124ES
Q312	8-729-900-63	TRANSISTOR DTA124ES
Q313	8-729-900-36	TRANSISTOR DTC124ES
Q314	8-729-900-36	TRANSISTOR DTC124ES
Q315	8-729-900-36	TRANSISTOR DTC124ES
Q316	8-729-900-36	TRANSISTOR DTC124ES
Q317	8-729-900-36	TRANSISTOR DTC124ES
Q318	8-729-900-36	TRANSISTOR DTC124ES
Q319	8-729-900-63	TRANSISTOR DTA124ES
Q320	8-729-900-63	TRANSISTOR DTA124ES
Q321	8-729-900-63	TRANSISTOR DTA124ES
Q322	8-729-900-63	TRANSISTOR DTA124ES
Q323	8-729-900-63	TRANSISTOR DTA124ES
Q324	8-729-900-63	TRANSISTOR DTA124ES
Q325	8-729-900-63	TRANSISTOR DTA124ES
Q326	8-729-900-63	TRANSISTOR DTA124ES
Q327	8-729-900-63	TRANSISTOR DTA124ES
Q328	8-729-900-36	TRANSISTOR DTC124ES
Q329	8-729-900-36	TRANSISTOR DTC124ES
Q330	8-729-900-36	TRANSISTOR DTC124ES
Q331	8-729-900-63	TRANSISTOR DTA124ES
Q332	8-729-900-63	TRANSISTOR DTA124ES
Q361	8-729-900-36	TRANSISTOR DTC124ES
Q363	8-729-900-36	TRANSISTOR DTC124ES
Q364	8-729-900-63	TRANSISTOR DTA124ES
Q401	8-729-900-36	TRANSISTOR DTC124ES
Q402	8-729-107-99	TRANSISTOR 2SC3622AK
Q452	8-729-107-99	TRANSISTOR 2SC3622AK
Q471	8-729-900-63	TRANSISTOR DTA124ES
Q472	8-729-900-63	TRANSISTOR DTA124ES
Q473	8-729-900-36	TRANSISTOR DTC124ES
Q502	8-729-900-36	TRANSISTOR DTC124ES
Q503	8-729-900-36	TRANSISTOR DTC124ES
Q504	8-729-900-63	TRANSISTOR DTA124ES
Q601	8-729-900-63	TRANSISTOR DTA124ES
Q602	8-729-900-63	TRANSISTOR DTA124ES
Q603	8-729-900-63	TRANSISTOR DTA124ES
Q604	8-729-107-99	TRANSISTOR 2SC3622AK
Q605	8-729-107-99	TRANSISTOR 2SC3622AK
Q606	8-729-107-99	TRANSISTOR 2SC3622AK
Q607	8-729-107-99	TRANSISTOR 2SC3622AK
Q608	8-729-107-99	TRANSISTOR 2SC3622AK
Q609	8-729-900-36	TRANSISTOR DTC124ES
Q654	8-729-107-99	TRANSISTOR 2SC3622AK
Q655	8-729-107-99	TRANSISTOR 2SC3622AK
Q656	8-729-107-99	TRANSISTOR 2SC3622AK
Q657	8-729-107-99	TRANSISTOR 2SC3622AK
Q658	8-729-107-99	TRANSISTOR 2SC3622AK
Q700	8-729-107-99	TRANSISTOR 2SC3622AK
Q701	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q702	8-729-108-05	TRANSISTOR 2SA1841PA
Q703	8-729-108-05	TRANSISTOR 2SA1841PA
Q704	8-729-203-21	TRANSISTOR 2SK389-GR

Ref.No.	Part No.	Description			
Q705	8-729-168-22	TRANSISTOR 2SC2682			
Q706	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q707	8-729-114-22	TRANSISTOR 2SA1142			
Q708	8-729-168-22	TRANSISTOR 2SC2682			
Q709	8-729-303-58	TRANSISTOR 2SC3851-0			
Q711	8-729-168-22	TRANSISTOR 2SC2682			
Q712	8-729-114-22	TRANSISTOR 2SA1142			
Q713	8-729-809-29	TRANSISTOR 2SC4431			
Q714	8-729-809-26	TRANSISTOR 2SA1684			
Q715	8-729-320-03	TRANSISTOR 2SC2921M-0			
Q716	8-729-300-22	TRANSISTOR 2SA1215			
Q717	8-729-108-14	TRANSISTOR 2SA988F			
Q718	8-729-108-14	TRANSISTOR 2SA988F			
Q721	8-729-108-05	TRANSISTOR 2SA1841PA			
Q722	8-729-108-14	TRANSISTOR 2SA988F			
Q723	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q724	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q750	8-729-107-99	TRANSISTOR 2SC3622K			
Q751	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q752	8-729-108-05	TRANSISTOR 2SA1841PA			
Q753	8-729-108-05	TRANSISTOR 2SA1841PA			
Q754	8-729-203-21	TRANSISTOR 2SK389-GR			
Q755	8-729-168-22	TRANSISTOR 2SC2682			
Q756	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q757	8-729-114-22	TRANSISTOR 2SA1142			
Q758	8-729-168-22	TRANSISTOR 2SC2682			
Q761	8-729-168-22	TRANSISTOR 2SC2682			
Q762	8-729-114-22	TRANSISTOR 2SA1142			
Q763	8-729-809-29	TRANSISTOR 2SC4431			
Q764	8-729-809-26	TRANSISTOR 2SA1684			
Q767	8-729-108-14	TRANSISTOR 2SA988F			
Q768	8-729-108-14	TRANSISTOR 2SA988F			
Q759	8-729-303-58	TRANSISTOR 2SC3851-0			
Q765	8-729-320-03	TRANSISTOR 2SC2921M-0			
Q766	8-729-300-22	TRANSISTOR 2SA1215			
Q801	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q802	8-729-209-15	TRANSISTOR 2SD2012			
Q803	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q804	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q805	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q806	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q807	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q810	8-729-114-22	TRANSISTOR 2SA1142			
Q811	8-729-900-63	TRANSISTOR DTA124ES			
Q831	8-729-108-14	TRANSISTOR 2SA988F			
Q832	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q881	8-729-108-14	TRANSISTOR 2SA988F			
R201	1-247-804-11	CARBON	75	5%	1/4W
R202	1-249-417-11	CARBON	1K	5%	1/4W
R203	1-249-437-11	CARBON	47K	5%	1/4W
R204	1-247-804-11	CARBON	75	5%	1/4W
R205	1-249-417-11	CARBON	1K	5%	1/4W
R206	1-249-437-11	CARBON	47K	5%	1/4W
R207	1-247-804-11	CARBON	75	5%	1/4W
R208	1-249-417-11	CARBON	1K	5%	1/4W
R209	1-249-437-11	CARBON	47K	5%	1/4W
R210	1-247-804-11	CARBON	75	5%	1/4W

Ref.No.	Part No.	Description			
R211	1-249-417-11	CARBON	1K	5%	1/4W
R212	1-249-437-11	CARBON	47K	5%	1/4W
R213	1-247-804-11	CARBON	75	5%	1/4W
R214	1-247-804-11	CARBON	75	5%	1/4W
R215	1-247-804-11	CARBON	75	5%	1/4W
R216	1-247-804-11	CARBON	75	5%	1/4W
R217	1-249-421-11	CARBON	2.2K	5%	1/4W
R218	1-249-426-11	CARBON	5.6K	5%	1/4W
R219	1-247-804-11	CARBON	75	5%	1/4W
R220	1-247-804-11	CARBON	75	5%	1/4W
R221	1-247-804-11	CARBON	75	5%	1/4W
R222	1-249-417-11	CARBON	1K	5%	1/4W
R223	1-249-437-11	CARBON	47K	5%	1/4W
R224	1-247-804-11	CARBON	75	5%	1/4W
R225	1-249-417-11	CARBON	1K	5%	1/4W
R226	1-249-437-11	CARBON	47K	5%	1/4W
R301	1-249-441-11	CARBON	100K	5%	1/4W
R302	1-249-429-11	CARBON	10K	5%	1/4W
R303	1-249-417-11	CARBON	1K	5%	1/4W
R304	1-249-409-11	CARBON	220	5%	1/4W
R305	1-249-411-11	CARBON	330	5%	1/4W
R306	1-249-441-11	CARBON	100K	5%	1/4W
R307	1-249-441-11	CARBON	100K	5%	1/4W
R308	1-249-441-11	CARBON	100K	5%	1/4W
R309	1-249-441-11	CARBON	100K	5%	1/4W
R310	1-249-441-11	CARBON	100K	5%	1/4W
R311	1-249-429-11	CARBON	10K	5%	1/4W
R312	1-249-433-11	CARBON	22K	5%	1/4W
R313	1-249-411-11	CARBON	330	5%	1/4W
R314	1-249-411-11	CARBON	330	5%	1/4W
R315	1-249-411-11	CARBON	330	5%	1/4W
R316	1-249-411-11	CARBON	330	5%	1/4W
R317	1-249-411-11	CARBON	330	5%	1/4W
R318	1-249-425-11	CARBON	4.7K	5%	1/4W
R319	1-249-425-11	CARBON	4.7K	5%	1/4W
R320	1-249-425-11	CARBON	4.7K	5%	1/4W
R321	1-249-425-11	CARBON	4.7K	5%	1/4W
R322	1-249-425-11	CARBON	4.7K	5%	1/4W
R323	1-249-405-11	CARBON	100	5%	1/4W
R324	1-249-429-11	CARBON	10K	5%	1/4W
R325	1-249-441-11	CARBON	100K	5%	1/4W
R326	1-249-441-11	CARBON	100K	5%	1/4W
R327	1-249-441-11	CARBON	100K	5%	1/4W
R328	1-249-441-11	CARBON	100K	5%	1/4W
R329	1-249-441-11	CARBON	100K	5%	1/4W
R330	1-249-403-11	CARBON	68	5%	1/4W
R341	1-249-429-11	CARBON	10K	5%	1/4W
R342	1-249-429-11	CARBON	10K	5%	1/4W
R343	1-249-411-11	CARBON	330	5%	1/4W
R344	1-249-411-11	CARBON	330	5%	1/4W
R345	1-249-407-11	CARBON	150	5%	1/4W
R346	1-249-394-11	CARBON	12	5%	1/4W
R351	1-249-420-11	CARBON	1.8K	5%	1/4W
R352	1-247-887-00	CARBON	220K	5%	1/4W
R353	1-249-421-11	CARBON	2.2K	5%	1/4W
R354	1-249-405-11	CARBON	100	5%	1/4W
R355	1-249-436-11	CARBON	39K	5%	1/4W

Ref.No.	Part No.	Description			
R356	1-249-417-11	CARBON	1K	5%	1/4W
R357	1-247-895-00	CARBON	470K	5%	1/4W
R358	1-249-441-11	CARBON	100K	5%	1/4W
R359	1-249-439-11	CARBON	68K	5%	1/4W
R360	1-249-420-11	CARBON	1.8K	5%	1/4W
R361	1-247-901-11	CARBON	820K	5%	1/4W
R362	1-249-441-11	CARBON	100K	5%	1/4W
R363	1-249-439-11	CARBON	68K	5%	1/4W
R364	1-249-422-11	CARBON	2.7K	5%	1/4W
R365	1-247-901-11	CARBON	820K	5%	1/4W
R366	1-249-441-11	CARBON	100K	5%	1/4W
R367	1-249-440-11	CARBON	82K	5%	1/4W
R368	1-249-422-11	CARBON	2.7K	5%	1/4W
R369	1-247-903-00	CARBON	1M	5%	1/4W
R370	1-249-441-11	CARBON	100K	5%	1/4W
R371	1-249-439-11	CARBON	68K	5%	1/4W
R372	1-249-421-11	CARBON	2.2K	5%	1/4W
R373	1-247-901-11	CARBON	820K	5%	1/4W
R374	1-249-441-11	CARBON	100K	5%	1/4W
R375	1-249-432-11	CARBON	18K	5%	1/4W
R376	1-249-414-11	CARBON	560	5%	1/4W
R377	1-247-887-00	CARBON	220K	5%	1/4W
R378	1-249-441-11	CARBON	100K	5%	1/4W
R379	1-249-435-11	CARBON	33K	5%	1/4W
R380	1-249-417-11	CARBON	1K	5%	1/4W
R381	1-247-893-11	CARBON	390K	5%	1/4W
R382	1-249-441-11	CARBON	100K	5%	1/4W
R383	1-249-440-11	CARBON	82K	5%	1/4W
R384	1-249-421-11	CARBON	2.2K	5%	1/4W
R385	1-247-903-00	CARBON	1M	5%	1/4W
R386	1-249-441-11	CARBON	100K	5%	1/4W
R387	1-249-439-11	CARBON	68K	5%	1/4W
R388	1-249-421-11	CARBON	2.2K	5%	1/4W
R389	1-247-901-11	CARBON	820K	5%	1/4W
R390	1-249-441-11	CARBON	100K	5%	1/4W
R391	1-249-440-11	CARBON	82K	5%	1/4W
R392	1-249-421-11	CARBON	2.2K	5%	1/4W
R393	1-247-903-00	CARBON	1M	5%	1/4W
R394	1-247-901-11	CARBON	820K	5%	1/4W
R395	1-249-441-11	CARBON	100K	5%	1/4W
R400	1-249-429-11	CARBON	10K	5%	1/4W
R401	1-249-411-11	CARBON	330	5%	1/4W
R402	1-249-417-11	CARBON	1K	5%	1/4W
R403	1-249-417-11	CARBON	1K	5%	1/4W
R404	1-249-417-11	CARBON	1K	5%	1/4W
R405	1-249-417-11	CARBON	1K	5%	1/4W
R406	1-249-417-11	CARBON	1K	5%	1/4W
R407	1-249-417-11	CARBON	1K	5%	1/4W
R408	1-249-417-11	CARBON	1K	5%	1/4W
R409	1-249-417-11	CARBON	1K	5%	1/4W
R410	1-249-417-11	CARBON	1K	5%	1/4W
R411	1-249-411-11	CARBON	330	5%	1/4W
R412	1-249-417-11	CARBON	1K	5%	1/4W
R413	1-247-804-11	CARBON	75	5%	1/4W
R414	1-249-441-11	CARBON	100K	5%	1/4W
R415	1-249-441-11	CARBON	100K	5%	1/4W
R416	1-249-417-11	CARBON	1K	5%	1/4W

Ref.No.	Part No.	Description			
R417	1-247-903-00	CARBON	1M	5%	1/4W
R418	1-247-897-11	CARBON	560K	5%	1/4W
R419	1-249-437-11	CARBON	47K	5%	1/4W
R420	1-249-413-11	CARBON	470	5%	1/4W
R421	1-249-409-11	CARBON	220	5%	1/4W
R423	1-249-441-11	CARBON	100K	5%	1/4W
R424	1-249-441-11	CARBON	100K	5%	1/4W
R425	1-249-437-11	CARBON	47K	5%	1/4W
R426	1-249-417-11	CARBON	1K	5%	1/4W
R427	1-249-405-11	CARBON	100	5%	1/4W
R428	1-249-426-11	CARBON	5.6K	5%	1/4W
R432	1-249-438-11	CARBON	56K	5%	1/4W
R433	1-249-441-11	CARBON	100K	5%	1/4W
R434	1-249-441-11	CARBON	100K	5%	1/4W
R439	1-249-441-11	CARBON	100K	5%	1/4W
R440	1-249-441-11	CARBON	100K	5%	1/4W
R441	1-249-441-11	CARBON	100K	5%	1/4W
R442	1-249-417-11	CARBON	1K	5%	1/4W
R443	1-249-441-11	CARBON	100K	5%	1/4W
R444	1-249-441-11	CARBON	100K	5%	1/4W
R445	1-249-441-11	CARBON	100K	5%	1/4W
R446	1-249-417-11	CARBON	1K	5%	1/4W
R447	1-249-417-11	CARBON	1K	5%	1/4W
R448	1-249-417-11	CARBON	1K	5%	1/4W
R449	1-249-417-11	CARBON	1K	5%	1/4W
R450	1-249-429-11	CARBON	10K	5%	1/4W
R451	1-249-411-11	CARBON	330	5%	1/4W
R452	1-249-417-11	CARBON	1K	5%	1/4W
R453	1-249-417-11	CARBON	1K	5%	1/4W
R454	1-249-417-11	CARBON	1K	5%	1/4W
R455	1-249-417-11	CARBON	1K	5%	1/4W
R456	1-249-417-11	CARBON	1K	5%	1/4W
R457	1-249-417-11	CARBON	1K	5%	1/4W
R458	1-249-417-11	CARBON	1K	5%	1/4W
R459	1-249-417-11	CARBON	1K	5%	1/4W
R460	1-249-417-11	CARBON	1K	5%	1/4W
R461	1-249-411-11	CARBON	330	5%	1/4W
R462	1-249-417-11	CARBON	1K	5%	1/4W
R463	1-249-425-11	CARBON	4.7K	5%	1/4W
R464	1-249-441-11	CARBON	100K	5%	1/4W
R465	1-249-441-11	CARBON	100K	5%	1/4W
R466	1-249-417-11	CARBON	1K	5%	1/4W
R467	1-247-903-00	CARBON	1M	5%	1/4W
R468	1-247-897-11	CARBON	560K	5%	1/4W
R469	1-249-437-11	CARBON	47K	5%	1/4W
R470	1-249-413-11	CARBON	470	5%	1/4W
R471	1-249-409-11	CARBON	220	5%	1/4W
R472	1-249-423-11	CARBON	3.3K	5%	1/4W
R473	1-249-441-11	CARBON	100K	5%	1/4W
R474	1-249-441-11	CARBON	100K	5%	1/4W
R475	1-249-437-11	CARBON	47K	5%	1/4W
R476	1-249-417-11	CARBON	1K	5%	1/4W
R477	1-249-405-11	CARBON	100	5%	1/4W
R478	1-249-426-11	CARBON	5.6K	5%	1/4W
R479	1-249-426-11	CARBON	5.6K	5%	1/4W
R480	1-249-429-11	CARBON	10K	5%	1/4W
R481	1-249-429-11	CARBON	10K	5%	1/4W

Ref.No.	Part No.	Description			
R482	1-249-438-11	CARBON	56K	5%	1/4W
R483	1-247-895-00	CARBON	470K	5%	1/4W
R484	1-249-441-11	CARBON	100K	5%	1/4W
R485	1-249-426-11	CARBON	5.6K	5%	1/4W
R486	1-249-426-11	CARBON	5.6K	5%	1/4W
R487	1-249-441-11	CARBON	100K	5%	1/4W
R488	1-249-441-11	CARBON	100K	5%	1/4W
R489	1-249-441-11	CARBON	100K	5%	1/4W
R490	1-249-441-11	CARBON	100K	5%	1/4W
R491	1-249-441-11	CARBON	100K	5%	1/4W
R492	1-249-441-11	CARBON	100K	5%	1/4W
R493	1-249-441-11	CARBON	100K	5%	1/4W
R494	1-249-441-11	CARBON	100K	5%	1/4W
R495	1-249-441-11	CARBON	100K	5%	1/4W
R496	1-249-437-11	CARBON	47K	5%	1/4W
R497	1-249-441-11	CARBON	100K	5%	1/4W
R498	1-249-429-11	CARBON	10K	5%	1/4W
R499	1-249-441-11	CARBON	100K	5%	1/4W
R501	1-249-425-11	CARBON	4.7K	5%	1/4W
R502	1-249-393-11	CARBON	10	5%	1/4W
R503	1-249-393-11	CARBON	10	5%	1/4W
R504	1-247-804-11	CARBON	75	5%	1/4W
R505	1-247-903-00	CARBON	1M	5%	1/4W
R506	1-249-441-11	CARBON	100K	5%	1/4W
R507	1-249-405-11	CARBON	100	5%	1/4W
R508	1-249-405-11	CARBON	100	5%	1/4W
R509	1-249-405-11	CARBON	100	5%	1/4W
R510	1-249-405-11	CARBON	100	5%	1/4W
R511	1-249-407-11	CARBON	150	5%	1/4W
R512	1-249-405-11	CARBON	100	5%	1/4W
R513	1-247-903-00	CARBON	1M	5%	1/4W
R514	1-249-429-11	CARBON	10K	5%	1/4W
R515	1-249-405-11	CARBON	100	5%	1/4W
R516	1-249-405-11	CARBON	100	5%	1/4W
R517	1-249-405-11	CARBON	100	5%	1/4W
R518	1-249-433-11	CARBON	22K	5%	1/4W
R519	1-249-433-11	CARBON	22K	5%	1/4W
R520	1-249-433-11	CARBON	22K	5%	1/4W
R521	1-249-441-11	CARBON	100K	5%	1/4W
R522	1-249-429-11	CARBON	10K	5%	1/4W
R523	1-249-405-11	CARBON	100	5%	1/4W
R525	1-249-429-11	CARBON	10K	5%	1/4W
R526	1-249-429-11	CARBON	10K	5%	1/4W
R527	1-249-429-11	CARBON	10K	5%	1/4W
R529	1-249-405-11	CARBON	100	5%	1/4W
R530	1-247-903-00	CARBON	1M	5%	1/4W
R531	1-249-401-11	CARBON	47	5%	1/4W
R532	1-249-429-11	CARBON	10K	5%	1/4W
R533	1-249-429-11	CARBON	10K	5%	1/4W
R534	1-249-429-11	CARBON	10K	5%	1/4W
R535	1-249-409-11	CARBON	220	5%	1/4W
R536	1-249-409-11	CARBON	220	5%	1/4W
R538	1-249-409-11	CARBON	220	5%	1/4W
R539	1-249-429-11	CARBON	10K	5%	1/4W
R540	1-249-413-11	CARBON	470	5%	1/4W
R541	1-249-405-11	CARBON	100	5%	1/4W
R543	1-249-405-11	CARBON	100	5%	1/4W

Ref.No.	Part No.	Description			
R545	1-249-413-11	CARBON	470	5%	1/4W
R546	1-249-405-11	CARBON	100	5%	1/4W
R547	1-249-405-11	CARBON	100	5%	1/4W
R548	1-249-405-11	CARBON	100	5%	1/4W
R549	1-249-429-11	CARBON	10K	5%	1/4W
R551	1-249-417-11	CARBON	1K	5%	1/4W
R552	1-249-417-11	CARBON	1K	5%	1/4W
R553	1-249-429-11	CARBON	10K	5%	1/4W
R554	1-249-429-11	CARBON	10K	5%	1/4W
R555	1-249-417-11	CARBON	1K	5%	1/4W
R556	1-249-417-11	CARBON	1K	5%	1/4W
R557	1-249-429-11	CARBON	10K	5%	1/4W
R558	1-249-429-11	CARBON	10K	5%	1/4W
R559	1-249-417-11	CARBON	1K	5%	1/4W
R560	1-249-417-11	CARBON	1K	5%	1/4W
R561	1-249-417-11	CARBON	1K	5%	1/4W
R562	1-249-417-11	CARBON	1K	5%	1/4W
R563	1-249-417-11	CARBON	1K	5%	1/4W
R564	1-249-429-11	CARBON	10K	5%	1/4W
R565	1-249-417-11	CARBON	1K	5%	1/4W
R601	1-247-842-11	CARBON	3K	5%	1/4W
R602	1-249-426-11	CARBON	5.6K	5%	1/4W
R603	1-249-421-11	CARBON	2.2K	5%	1/4W
R604	1-249-419-11	CARBON	1.5K	5%	1/4W
R605	1-249-425-11	CARBON	4.7K	5%	1/4W
R606	1-249-425-11	CARBON	4.7K	5%	1/4W
R607	1-247-848-11	CARBON	5.1K	5%	1/4W
R608	1-249-409-11	CARBON	220	5%	1/4W
R609	1-249-421-11	CARBON	2.2K	5%	1/4W
R610	1-249-413-11	CARBON	470	5%	1/4W
R611	1-249-437-11	CARBON	47K	5%	1/4W
R612	1-249-418-11	CARBON	1.2K	5%	1/4W
R613	1-249-416-11	CARBON	820	5%	1/4W
R614	1-249-442-11	CARBON	510	5%	1/4W
R615	1-249-437-11	CARBON	47K	5%	1/4W
R616	1-249-423-11	CARBON	3.3K	5%	1/4W
R617	1-249-423-11	CARBON	3.3K	5%	1/4W
R618	1-249-423-11	CARBON	3.3K	5%	1/4W
R620	1-249-421-11	CARBON	2.2K	5%	1/4W
R621	1-249-424-11	CARBON	3.9K	5%	1/4W
R624	1-249-437-11	CARBON	47K	5%	1/4W
R625	1-249-426-11	CARBON	5.6K	5%	1/4W
R626	1-249-420-11	CARBON	1.8K	5%	1/4W
R627	1-249-424-11	CARBON	3.9K	5%	1/4W
R628	1-249-423-11	CARBON	3.3K	5%	1/4W
R629	1-249-423-11	CARBON	3.3K	5%	1/4W
R630	1-249-423-11	CARBON	3.3K	5%	1/4W
R631	1-249-437-11	CARBON	47K	5%	1/4W
R632	1-249-429-11	CARBON	10K	5%	1/4W
R633	1-249-393-11	CARBON	10	5%	1/4W
R635	1-249-405-11	CARBON	100	5%	1/4W
R638	1-249-405-11	CARBON	100	5%	1/4W
R645	1-247-903-00	CARBON	1M	5%	1/4W
R646	1-247-903-00	CARBON	1M	5%	1/4W
R647	1-247-903-00	CARBON	1M	5%	1/4W
R648	1-249-418-11	CARBON	1.2K	5%	1/4W
R651	1-247-842-11	CARBON	3K	5%	1/4W

Ref.No.	Part No.	Description				
R652	1-249-426-11	CARBON	5.6K	5%	1/4W	
R653	1-249-421-11	CARBON	2.2K	5%	1/4W	
R654	1-249-419-11	CARBON	1.5K	5%	1/4W	
R655	1-249-425-11	CARBON	4.7K	5%	1/4W	
R656	1-249-425-11	CARBON	4.7K	5%	1/4W	
R657	1-247-848-11	CARBON	5.1K	5%	1/4W	
R658	1-249-409-11	CARBON	220	5%	1/4W	
R659	1-249-421-11	CARBON	2.2K	5%	1/4W	
R660	1-249-413-11	CARBON	470	5%	1/4W	
R661	1-249-437-11	CARBON	47K	5%	1/4W	
R662	1-249-418-11	CARBON	1.2K	5%	1/4W	
R663	1-249-416-11	CARBON	820	5%	1/4W	
R664	1-249-442-11	CARBON	510	5%	1/4W	
R665	1-249-437-11	CARBON	47K	5%	1/4W	
R666	1-249-423-11	CARBON	3.3K	5%	1/4W	
R667	1-249-423-11	CARBON	3.3K	5%	1/4W	
R668	1-249-423-11	CARBON	3.3K	5%	1/4W	
R670	1-249-421-11	CARBON	2.2K	5%	1/4W	
R671	1-249-424-11	CARBON	3.9K	5%	1/4W	
R674	1-249-437-11	CARBON	47K	5%	1/4W	
R675	1-249-426-11	CARBON	5.6K	5%	1/4W	
R676	1-249-420-11	CARBON	1.8K	5%	1/4W	
R677	1-249-424-11	CARBON	3.9K	5%	1/4W	
R678	1-249-423-11	CARBON	3.3K	5%	1/4W	
R679	1-249-423-11	CARBON	3.3K	5%	1/4W	
R680	1-249-423-11	CARBON	3.3K	5%	1/4W	
R681	1-249-437-11	CARBON	47K	5%	1/4W	
R685	1-249-405-11	CARBON	100	5%	1/4W	
R688	1-249-405-11	CARBON	100	5%	1/4W	
R697	1-249-441-11	CARBON	100K	5%	1/4W	
R698	1-249-418-11	CARBON	1.2K	5%	1/4W	
R700	1-249-426-11	CARBON	5.6K	5%	1/4W	
R701	1-249-417-11	CARBON	1K	5%	1/4W	
R702	⚠.1-247-704-11	CARBON	220	5%	1/4W	F
R703	⚠.1-247-704-11	CARBON	220	5%	1/4W	F
R704	1-249-405-11	CARBON	100	5%	1/4W	
R705	1-247-903-00	CARBON	1M	5%	1/4W	
R706	⚠.1-247-694-11	CARBON	33	5%	1/4W	F
R707	1-249-409-11	CARBON	220	5%	1/4W	
R708	1-249-421-11	CARBON	2.2K	5%	1/4W	
R709	1-249-419-11	CARBON	1.5K	5%	1/4W	
R710	1-247-903-00	CARBON	1M	5%	1/4W	
R711	1-249-434-11	CARBON	27K	5%	1/4W	
R712	1-249-406-11	CARBON	120	5%	1/4W	
R713	1-249-490-11	CARBON	27K	5%	1/2W	
R714	1-249-425-11	CARBON	4.7K	5%	1/4W	
R715	⚠.1-247-700-11	CARBON	100	5%	1/4W	F
R716	1-249-422-11	CARBON	2.7K	5%	1/4W	
R717	1-249-415-11	CARBON	680	5%	1/4W	
R718	⚠.1-247-688-11	CARBON	10	5%	1/4W	F
R719	⚠.1-247-708-11	CARBON	470	5%	1/4W	F
R720	⚠.1-247-688-11	CARBON	10	5%	1/4W	F
R721	⚠.1-247-688-11	CARBON	10	5%	1/4W	F
R722	⚠.1-247-739-11	CARBON	100	5%	1/2W	F
R723	⚠.1-247-688-11	CARBON	10	5%	1/4W	F
R724	⚠.1-214-789-00	RES, METAL PLATE	0.1		5W	
R725	⚠.1-214-789-00	RES, METAL PLATE	0.1		5W	

Ref.No.	Part No.	Description				
R726	1-249-482-11	CARBON	4.7	5%	1/2W	
R727	1-247-727-11	CARBON	10	5%	1/2W	
R728	1-249-429-11	CARBON	10K	5%	1/4W	
R729	1-249-429-11	CARBON	10K	5%	1/4W	
R730	⚠.1-247-700-11	CARBON	100	5%	1/4W	F
R731	1-249-419-11	CARBON	1.5K	5%	1/4W	
R732	1-249-431-11	CARBON	15K	5%	1/4W	
R733	1-249-429-11	CARBON	10K	5%	1/4W	
R734	1-249-436-11	CARBON	39K	5%	1/4W	
R735	1-249-437-11	CARBON	47K	5%	1/4W	
R736	1-249-417-11	CARBON	1K	5%	1/4W	
R737	1-249-437-11	CARBON	47K	5%	1/4W	
R738	1-249-438-11	CARBON	56K	5%	1/4W	
R739	⚠.1-247-700-11	CARBON	100	5%	1/4W	F
R740	1-249-417-11	CARBON	1K	5%	1/4W	
R741	1-249-431-11	CARBON	15K	5%	1/4W	
R743	⚠.1-215-869-11	METAL OXIDE	1K	5%	1W	F
R744	1-249-429-11	CARBON	10K	5%	1/4W	
R745	1-249-417-11	CARBON	1K	5%	1/4W	
R750	1-249-426-11	CARBON	5.6K	5%	1/4W	
R751	1-249-417-11	CARBON	1K	5%	1/4W	
R752	⚠.1-247-704-11	CARBON	220	5%	1/4W	F
R753	⚠.1-247-704-11	CARBON	220	5%	1/4W	F
R754	1-249-405-11	CARBON	100	5%	1/4W	
R755	1-247-903-00	CARBON	1M	5%	1/4W	
R756	⚠.1-247-694-11	CARBON	33	5%	1/4W	F
R757	1-249-409-11	CARBON	220	5%	1/4W	
R758	1-249-421-11	CARBON	2.2K	5%	1/4W	
R759	1-249-419-11	CARBON	1.5K	5%	1/4W	
R760	1-247-903-00	CARBON	1M	5%	1/4W	
R761	1-249-434-11	CARBON	27K	5%	1/4W	
R762	1-249-406-11	CARBON	120	5%	1/4W	
R763	1-249-490-11	CARBON	27K	5%	1/2W	
R764	1-249-425-11	CARBON	4.7K	5%	1/4W	
R765	⚠.1-247-700-11	CARBON	100	5%	1/4W	F
R766	1-249-422-11	CARBON	2.7K	5%	1/4W	
R767	1-249-415-11	CARBON	680	5%	1/4W	
R768	⚠.1-247-688-11	CARBON	0	5%	1/4W	F
R769	⚠.1-247-708-11	CARBON	70	5%	1/4W	F
R770	⚠.1-247-688-11	CARBON	10	5%	1/4W	F
R771	⚠.1-247-688-11	CARBON	10	5%	1/4W	F
R772	⚠.1-247-739-11	CARBON	100	5%	1/2W	F
R773	⚠.1-247-688-11	CARBON	10	5%	1/4W	F
R774	⚠.1-214-789-00	RES, METAL PLATE	0.1		5W	
R775	⚠.1-214-789-00	RES, METAL PLATE	0.1		5W	
R776	1-249-482-11	CARBON	4.7	5%	1/2W	
R777	1-247-727-11	CARBON	10	5%	1/2W	
R780	⚠.1-247-700-11	CARBON	100	5%	1/4W	F
R781	1-249-419-11	CARBON	1.5K	5%	1/4W	
R782	1-249-431-11	CARBON	15K	5%	1/4W	
R789	⚠.1-247-700-11	CARBON	100	5%	1/4W	F
R790	1-249-417-11	CARBON	1K	5%	1/4W	
R791	1-249-431-11	CARBON	15K	5%	1/4W	
R793	⚠.1-215-869-11	METAL OXIDE	1K	5%	1W	F
R794	1-249-429-11	CARBON	10K	5%	1/4W	
R795	1-249-417-11	CARBON	1K	5%	1/4W	
R801	1-249-425-11	CARBON	4.7K	5%	1/4W	

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description				
R802	1-249-396-11	CARBON	18	5%	1/4W	
R803	1-249-417-11	CARBON	1K	5%	1/4W	
R804	1-249-436-11	CARBON	39K	5%	1/4W	
R805	1-249-429-11	CARBON	10K	5%	1/4W	
R806	1-249-426-11	CARBON	5.6K	5%	1/4W	
R807	1-249-429-11	CARBON	10K	5%	1/4W	
R808	1-249-426-11	CARBON	5.6K	5%	1/4W	
R809	1-249-417-11	CARBON	1K	5%	1/4W	
R810	1-249-429-11	CARBON	10K	5%	1/4W	
R812	1-249-393-11	CARBON	10	5%	1/4W	
R813	1-249-429-11	CARBON	10K	5%	1/4W	
R814	1-249-417-11	CARBON	1K	5%	1/4W	
R815	1-249-426-11	CARBON	5.6K	5%	1/4W	
R816	⚠.1-247-704-11	CARBON	220	5%	1/4W	F
R817	⚠.1-249-447-11	CARBON	1	5%	1/4W	F
R818	⚠.1-249-447-11	CARBON	1	5%	1/4W	F
R819	1-247-895-00	CARBON	470K	5%	1/4W	
R831	1-249-438-11	CARBON	56K	5%	1/4W	
R832	1-249-417-11	CARBON	1K	5%	1/4W	
R833	1-249-423-11	CARBON	3.3K	5%	1/4W	
R834	1-249-438-11	CARBON	56K	5%	1/4W	
R835	1-249-419-11	CARBON	1.5K	5%	1/4W	
R836	1-249-431-11	CARBON	15K	5%	1/4W	
R837	1-217-151-00	RES, METAL PLATE 0.22				
R838	1-249-438-11	CARBON	56K	5%	1/4W	
R839	1-249-393-11	CARBON	10	5%	1/4W	
R840	1-249-389-11	CARBON	4.7	5%	1/4W	
R881	1-249-438-11	CARBON	56K	5%	1/4W	
R882	1-249-417-11	CARBON	1K	5%	1/4W	
R883	1-249-423-11	CARBON	3.3K	5%	1/4W	
R884	1-249-438-11	CARBON	56K	5%	1/4W	
R885	1-249-419-11	CARBON	1.5K	5%	1/4W	
R886	1-249-431-11	CARBON	15K	5%	1/4W	
R887	1-217-151-00	RES, METAL PLATE 0.22				
R888	1-249-437-11	CARBON	47K	5%	1/4W	
R889	1-249-393-11	CARBON	10	5%	1/4W	
R890	1-249-389-39	CARBON	4.7	5%	1/4W	
R901	⚠.1-202-725-06 4	SOLID	3.3M	10%	1/2W	
RT701	1-228-989-00	RES, ADJ, CARBON 500				
RT751	1-228-989-00	RES, ADJ, CARBON 500				
RV401	1-238-655-11	RES, VAR, CARBON 100KX4 (VOLUME)				
RV501	1-238-637-11	RES, VAR, CARBON 50K/50K (BALANCE)				
RX501	1-466-049-11	MODULE, LIGHT CATCH (DIGITAL INPUT OPTICAL)				
RY402	1-515-683-11	RELAY				
RY701	1-515-356-00	RELAY				
RY831	1-515-533-11	RELAY				
RY901	1-515-701-11	RELAY				
S301	1-554-303-21	SWITCH, KEY BOARD (SYSTEM POWER ON/STANDBY)				
S302	1-554-303-21	SWITCH, KEY BOARD (EQ MEMORY WRITE)				
S303	1-554-303-21	SWITCH, KEY BOARD (EDIT VIDEO)				
S304	1-554-303-21	SWITCH, KEY BOARD (TAPE 2)				
S305	1-554-303-21	SWITCH, KEY BOARD (EQ MEMORY SET)				
S306	1-554-303-21	SWITCH, KEY BOARD (EDIT AUDIO)				
S307	1-554-303-21	SWITCH, KEY BOARD (DIGITAL)				
S308	1-554-303-21	SWITCH, KEY BOARD (1-COAXIAL 2-OPTICAL AUDIO)				

Ref.No.	Part No.	Description
S309	1-554-303-21	SWITCH, KEY BOARD (SURROUND ON/OFF)
S310	1-554-303-21	SWITCH, KEY BOARD (DISPLAY/DEMO RTA/EQ)
S311	1-554-303-21	SWITCH, KEY BOARD (EQUALIZER ON/OFF)
S312	1-554-303-21	SWITCH, KEY BOARD (EQUALIZER PEAK/HOLD)
S313	1-554-303-21	SWITCH, KEY BOARD (SURROUND MODE ▽)
S314	1-554-303-21	SWITCH, KEY BOARD (SURROUND MODE △)
S315	1-554-303-21	SWITCH, KEY BOARD (EQUALIZER MODE ▽)
S316	1-554-303-21	SWITCH, KEY BOARD (EQUALIZER MODE △)
S317	1-554-303-21	SWITCH, KEY BOARD (VIDEO 1)
S318	1-554-303-21	SWITCH, KEY BOARD (VIDEO 2/CDV)
S319	1-554-303-21	SWITCH, KEY BOARD (VIDEO 3)
S320	1-554-303-21	SWITCH, KEY BOARD (TAPE 1)
S321	1-554-303-21	SWITCH, KEY BOARD (PHONO)
S322	1-554-303-21	SWITCH, KEY BOARD (TUNER)
S323	1-554-303-21	SWITCH, KEY BOARD (CD)
S324	1-554-303-21	SWITCH, KEY BOARD (DAT)
S325	1-554-303-21	SWITCH, KEY BOARD (PRESET TUNING +)
S326	1-554-303-21	SWITCH, KEY BOARD (PRESER TUNING -)
S327	1-554-303-21	SWITCH, KEY BOARD (INDEX TUNING +)
S328	1-554-303-21	SWITCH, KEY BOARD (INDEX TUNING -)
S329	1-554-303-21	SWITCH, KEY BOARD (TUNER FM/AM)
S330	1-554-303-21	SWITCH, KEY BOARD (TUNER FM MODE)
S331	1-554-303-21	SWITCH, KEY BOARD (TUNER INDEX SELECT)
S332	1-554-303-21	SWITCH, KEY BOARD (PRESET EQ LINK ON/OFF)
S333	1-554-303-21	SWITCH, KEY BOARD (CURSOR ▷)
S334	1-554-303-21	SWITCH, KEY BOARD (CURSOR ▽)
S335	1-554-303-21	SWITCH, KEY BOARD (CURSOR △)
S336	1-554-303-21	SWITCH, KEY BOARD (CURSOR ◁)
S337	1-554-303-21	SWITCH, KEY BOARD (TUNING)
S338	1-554-303-21	SWITCH, KEY BOARD (INDEX)
S339	1-554-303-21	SWITCH, KEY BOARD (EQUALIZER)
S340	1-554-303-21	SWITCH, KEY BOARD (SURROUND)
S341	1-554-303-21	SWITCH, KEY BOARD (SHIFT)
S342	1-554-303-21	SWITCH, KEY BOARD (0)
S343	1-554-303-21	SWITCH, KEY BOARD (SLOPE)
S344	1-554-303-21	SWITCH, KEY BOARD (BAND)
S345	1-554-303-21	SWITCH, KEY BOARD (9)
S346	1-554-303-21	SWITCH, KEY BOARD (8)
S347	1-554-303-21	SWITCH, KEY BOARD (7)
S348	1-554-303-21	SWITCH, KEY BOARD (MEMORY)
S349	1-554-303-21	SWITCH, KEY BOARD (6)
S350	1-554-303-21	SWITCH, KEY BOARD (5)
S351	1-554-303-21	SWITCH, KEY BOARD (4)
S352	1-554-303-21	SWITCH, KEY BOARD (EQ PGM SET)
S353	1-554-303-21	SWITCH, KEY BOARD (3)
S354	1-554-303-21	SWITCH, KEY BOARD (2)
S355	1-554-303-21	SWITCH, KEY BOARD (1)
S356	1-554-303-21	SWITCH, KEY BOARD (DIRECT)
S361	1-554-303-21	SWITCH, KEY BOARD (DDS)
S363	1-554-303-21	SWITCH, KEY BOARD (MUTING)
S701	1-571-854-21	SWITCH, PUSH (2 KEY)(SPEAKER A)
S702	1-571-854-21	SWITCH, PUSH (2 KEY)(SPEAKER B)

Note:	Note:
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Ref.No.	Part No.	Description
T901	⚠.1-449-611-11	TRANSFORMER, POWER
T902	⚠.1-449-611-11	TRANSFORMER, POWER
TM701	1-537-193-11	TERMINAL BOARD (SP)(SPEAKER)
TM801	1-564-980-11	PIN, CONNECTOR 4P(CONTROL S AUDIO OUT)
TM831	1-537-156-21	TERMINAL BOARD (SPEAKER) (SURROUND SPEAKER)
TP401	*1-560-060-00	PIN, CONNECTOR 2P
TP701	*1-560-062-00	PIN, CONNECTOR 4P
VZ901	1-807-293-11	VARISTOR (SNR-14A 140K)
X501	1-577-269-11	VIBRATOR, CRYSTAL
X502	1-577-305-11	VIBRATOR, CRYSTAL

ACCESSORY & PACKING MATERIAL

1-417-141-11	MATCHING TRANSFORMER, ANTENNA
1-465-143-11	REMOTE COMMANDER (RM-P201)
1-501-224-00	ANTENNA, FEEDER
1-501-374-11	ANTENNA, LOOP
3-750-592-31	(Canadian)...MANUAL, INSTRUCTION
3-750-592-21	MANUAL, INSTRUCTION
3-795-433-31	(Canadian)...INSTRUCTION
*4-931-046-01	INDIVIDUAL CARTON
*4-931-047-01	CUSHION

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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Audio Group

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SONY
SERVICE MANUAL

US Model
Canadian Model

SUPPLEMENT-1

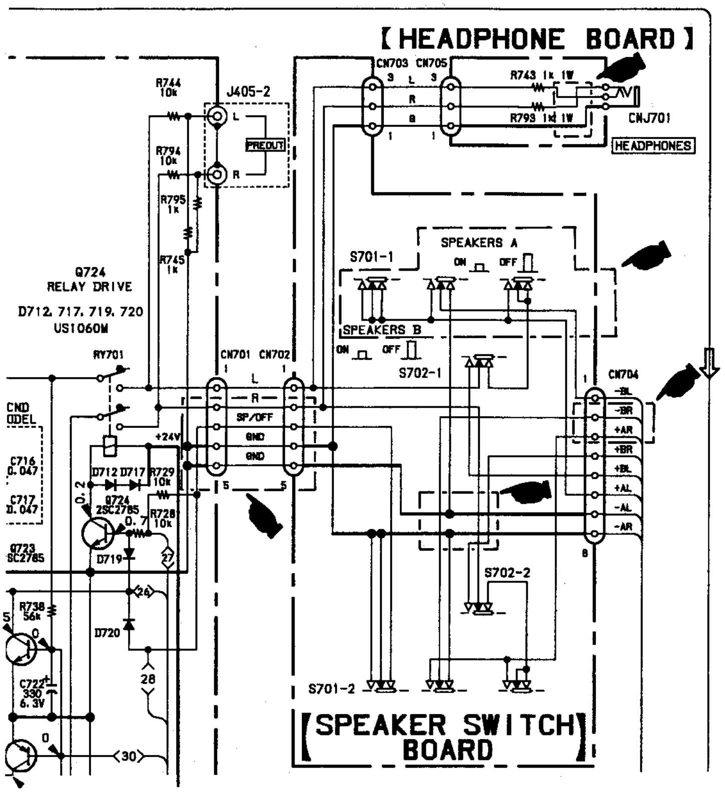
File this supplement with the Service Manual.

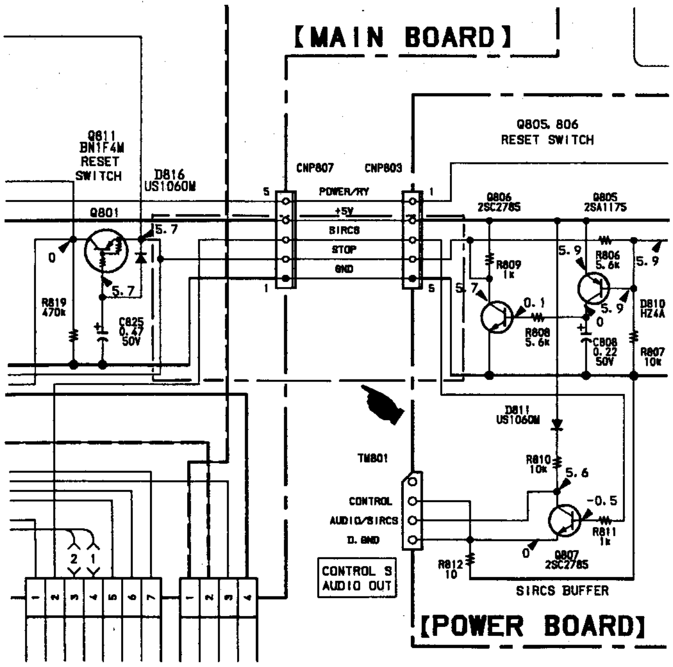
Subject : correction and frame schematic diagram

CORRECTION

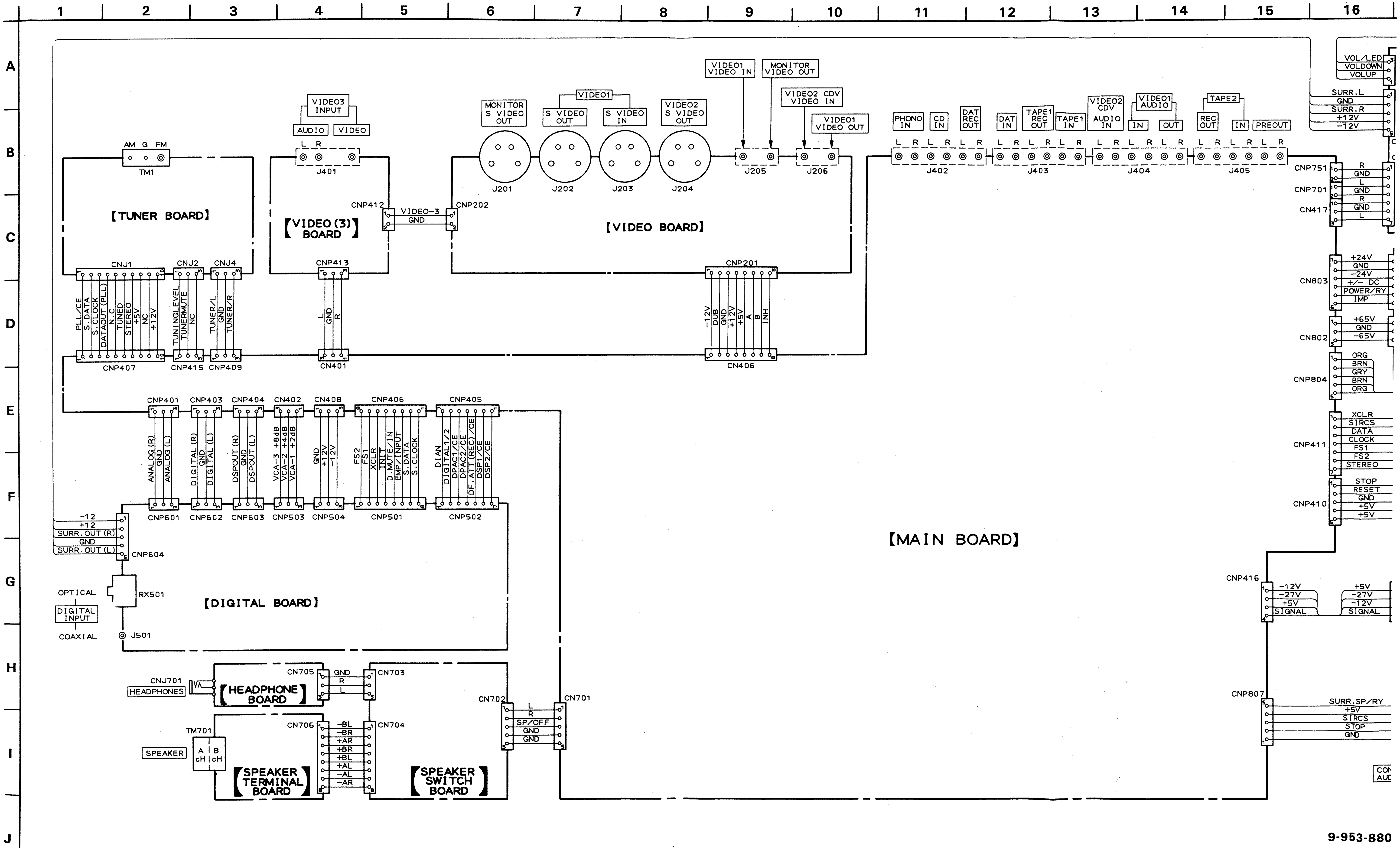
3-4. SCHEMATIC DIAGRAM
—PRE, MAIN AMP/POWER SECTION—

Page 27. ☛ : corrected portions


[HEADPHONE BOARD]
CN703
CN705
R743 1k 1W
R793 1k 1W
CNJ701
HEADPHONES
R744 10k
J405-2
PREOUT
L
R
R794 10k
R795 1k
R745 1k
Q724 RELAY DRIVE
D712, 717, 719, 720 US1060M
RY701
SPEAKERS A
ON
OFF
S701-1
SPEAKERS B
S702-1
CN701
CN702
SP/OFF
GND
+24V
CN704
-BL
-BR
+AR
+BR
+BL
+AL
-AL
-AR
C716 0.047
C717 0.047
D712
D717
R729 10k
Q724 2SC2785
R728 10k
0.7
D719
27
24
D720
28
Q723 2SC2785
R738 56k
C722 330 6.3V
30
S702-2
S701-2
[SPEAKER SWITCH BOARD]


[MAIN BOARD]
Q811 BN1F4M RESET SWITCH
D816 US1060M
Q801
5.7
R819 470k
C825 0.47 50V
CNP807
CNP803
POWER/RY
+5V
SIRCS
STOP
GND
Q805, 806 RESET SWITCH
Q806 2SC2785
Q805 2SA1175
R809 1k
R806 5.6k
5.9
0.1
R808 5.6k
C808 0.22 50V
D810 HZ4A
R807 10k
D811 US1060M
R810 10k
5.6
-0.5
TM801
CONTROL
AUDIO/SIRCS
D.GND
CONTROL S AUDIO OUT
R811 1k
R812 10
Q807 2SC2785
SIRCS BUFFER
[POWER BOARD]

FRAME SCHEMATIC DIAGRAM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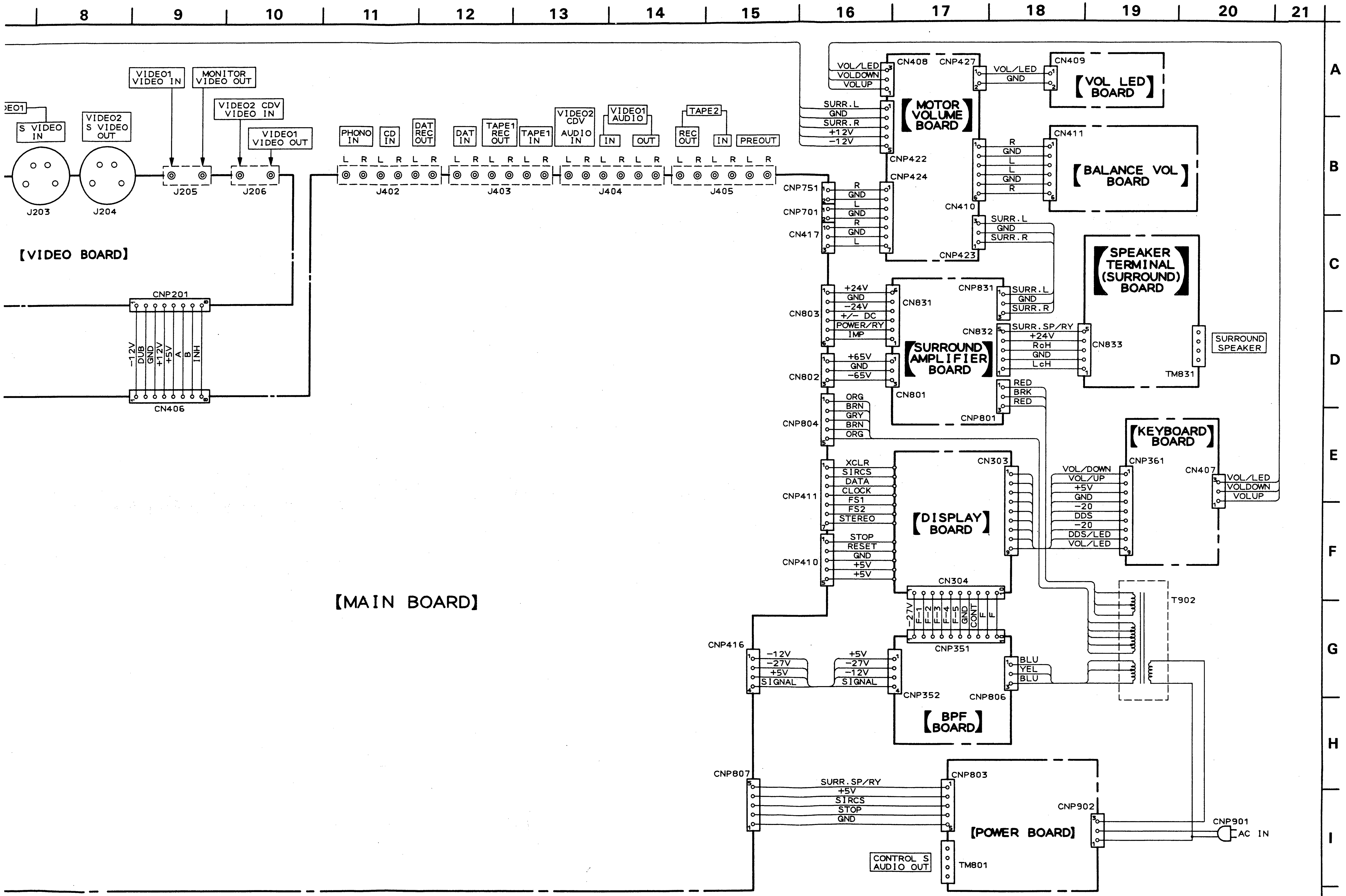
AM G FM
TM1
【TUNER BOARD】
CNJ1
CNJ2
CNJ4
PLL/CE
S.DATA
S.CLOCK
DATAOUT(PLL)
N.C
TUNED
STEREO
+5V
NC
+12V
TUNINGLEVEL
TUNERMUTE
NC
TUNER/L
GND
TUNER/R
CNP407
CNP415
CNP409
VIDEO3 INPUT
AUDIO
VIDEO
L R
J401
【VIDEO (3) BOARD】
CNP412
VIDEO-3
GND
CNP413
L
GND
R
CN401
MONITOR S VIDEO OUT
VIDEO1
S VIDEO OUT
S VIDEO IN
VIDEO2 S VIDEO OUT
J201
J202
J203
J204
VIDEO1 VIDEO IN
MONITOR VIDEO OUT
VIDEO2 CDV VIDEO IN
VIDEO1 VIDEO OUT
J205
J206
CNP202
【VIDEO BOARD】
CNP201
-12V
DUB
GND
+12V
+5V
A
B
INH
CN406
PHONO IN
CD IN
DAT REC OUT
DAT IN
TAPE1 REC OUT
TAPE1 IN
VIDEO2 CDV AUDIO IN
VIDEO1 AUDIO
IN
OUT
TAPE2
REC OUT
IN
PREOUT
L R L R L R
J402
J403
J404
J405
VOL/LED
VOLDOWN
VOLUP
SURR.L
GND
SURR.R
+12V
-12V
CNP751
CNP701
CN417
R
GND
L
GND
R
GND
L
CN803
+24V
GND
-24V
+/- DC
POWER/RY
IMP
CN802
+65V
GND
-65V
CNP804
ORG
BRN
GRY
BRN
ORG
CNP411
XCLR
SIRCS
DATA
CLOCK
FS1
FS2
STEREO
CNP410
STOP
RESET
GND
+5V
+5V
CNP401
CNP403
CNP404
CN402
CN408
CNP406
CNP405
ANALOG(R)
GND
ANALOG(L)
DIGITAL(R)
GND
DIGITAL(L)
DSPOUT(R)
GND
DSPOUT(L)
VCA-3 +8dB
VCA-2 +4dB
VCA-1 +2dB
GND
+12V
-12V
FS2
FS1
XCLR
INIT
D.MUTE/IN
EMP/INPUT
S.DATA
S.CLOCK
DIAN
DIGITAL1/2
DPAC1/CE
DPAC2/CE
DF.ATT(REC)/CE
DSP1/CE
DSP2/CE
CNP601
CNP602
CNP603
CNP503
CNP504
CNP501
CNP502
-12
+12
SURR.OUT(R)
GND
SURR.OUT(L)
CNP604
【MAIN BOARD】
OPTICAL
DIGITAL INPUT
COAXIAL
RX501
J501
【DIGITAL BOARD】
CNP416
-12V
-27V
+5V
SIGNAL
+5V
-27V
-12V
SIGNAL
CNJ701
HEADPHONES
CN705
【HEADPHONE BOARD】
GND
R
L
CN703
CN702
L
R
SP/OFF
GND
GND
CN701
TM701
SPEAKER
A cH
B cH
CN706
【SPEAKER TERMINAL BOARD】
-BL
-BR
+AR
+BR
+BL
+AL
-AL
-AR
CN704
【SPEAKER SWITCH BOARD】
CNP807
SURR.SP/RY
+5V
SIRCS
STOP
GND
CON
AUD

9-953-880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VIDEO1 VIDEO IN
MONITOR VIDEO OUT
VIDEO2 CDV VIDEO IN
VIDEO1 VIDEO OUT
S VIDEO IN
VIDEO2 S VIDEO OUT
J203
J204
J205
J206
PHONO IN
CD IN
DAT REC OUT
DAT IN
TAPE1 REC OUT
TAPE1 IN
VIDEO2 CDV AUDIO IN
VIDEO1 AUDIO
IN
OUT
TAPE2
REC OUT
IN
PREOUT
J402
J403
J404
J405
[VIDEO BOARD]
CNP201
-12V
DUB
GND
+12V
+5V
A
B
INH
CN406
[MAIN BOARD]
CN408
CNP427
VOL/LED
VOLDOWN
VOLUP
SURR.L
GND
SURR.R
+12V
-12V
[MOTOR VOLUME BOARD]
CNP422
CNP424
CN409
VOL/LED
GND
[VOL LED BOARD]
CN411
R
GND
L
L
GND
R
[BALANCE VOL BOARD]
CN410
CNP751
CNP701
CN417
R
GND
L
GND
R
GND
L
SURR.L
GND
SURR.R
CNP423
[SPEAKER TERMINAL (SURROUND) BOARD]
CN803
+24V
GND
-24V
+/- DC
POWER/RY
IMP
CN831
CNP831
SURR.L
GND
SURR.R
CN832
SURR.SP/RY
+24V
RcH
GND
LcH
CN833
SURROUND SPEAKER
TM831
[SURROUND AMPLIFIER BOARD]
CN802
+65V
GND
-65V
CN801
RED
BRK
RED
CNP801
CNP804
ORG
BRN
GRY
BRN
ORG
[KEYBOARD BOARD]
CNP361
CN407
VOL/DOWN
VOL/UP
+5V
GND
-20
DDS
-20
DDS/LED
VOL/LED
VOL/LED
VOLDOWN
VOLUP
CNP411
XCLR
SIRCS
DATA
CLOCK
FS1
FS2
STEREO
CN303
[DISPLAY BOARD]
CNP410
STOP
RESET
GND
+5V
+5V
CN304
-27V
F-1
F-2
F-3
F-4
F-5
GND
CONT
F
F
CNP351
T902
CNP416
-12V
-27V
+5V
SIGNAL
+5V
-27V
-12V
SIGNAL
CNP352
BLU
YEL
BLU
CNP806
[BPF BOARD]
CNP807
SURR.SP/RY
+5V
SIRCS
STOP
GND
CNP803
CNP902
[POWER BOARD]
CNP901
AC IN
CONTROL S AUDIO OUT
TM801

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